Dental Digest

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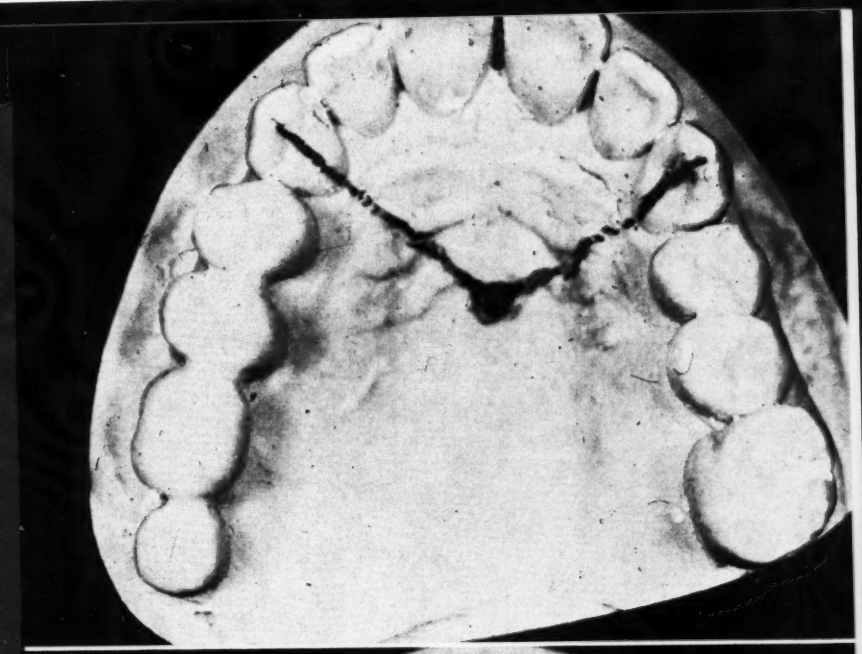

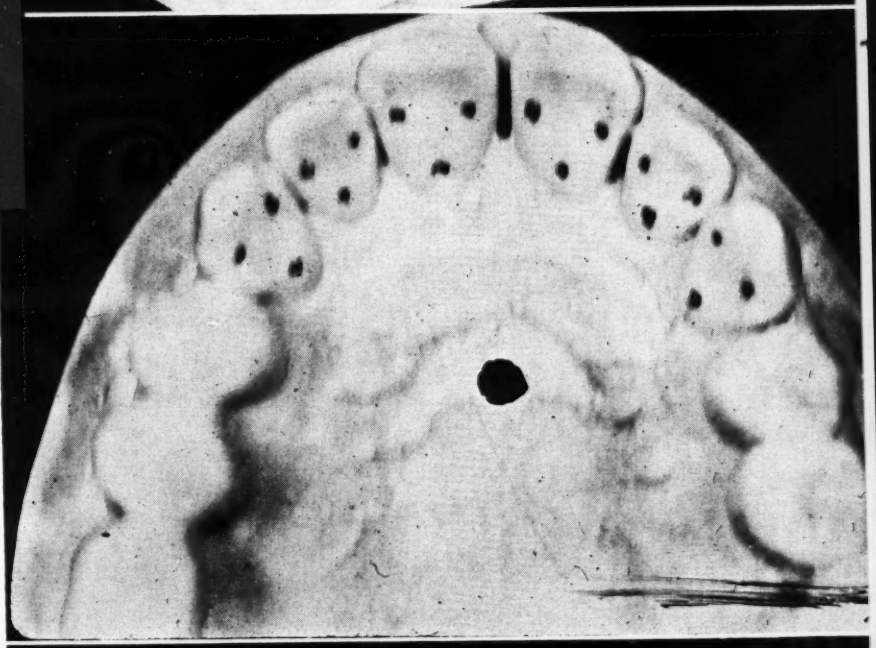

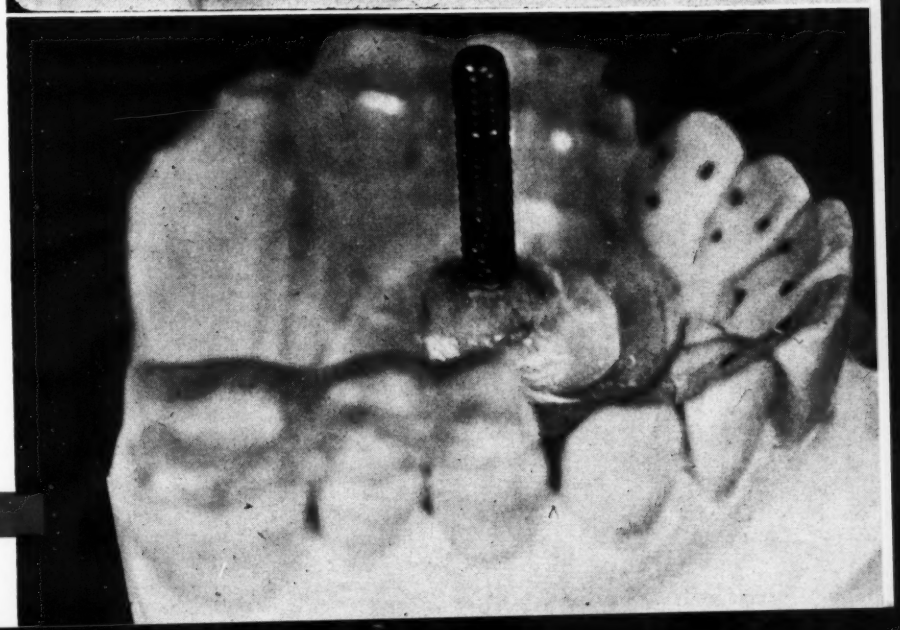

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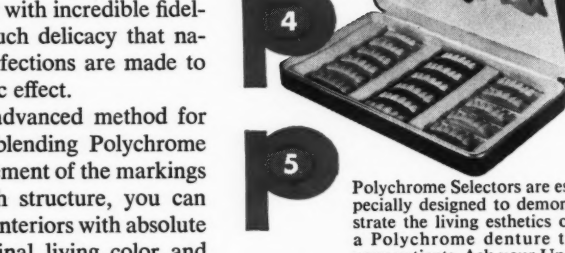

Polychrome

THE ANTERIOR TEETH WITH THE NEW COLOR DIMENSION

UNIVERSAL DENTAL COMPANY • 48th at Brown Street • Philadelphia 39, Pa.

Vol. 67, No. 11

Dental Digest

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November 1961

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About Our CONTRIBUTORS

GEORGE F. EISENBRAND, D.D.S. (University of Illinois, College of Dentistry, 1923) is a general practitioner who will be remembered by DIGEST readers for his previous article, UPPER ANTERIOR BRIDGE WITH NON-PARALLEL CUSPIDS. In the current issue he presents THE USE OF A JIG TO ESTABLISH PARALLELISM.

ABRAHAM G. KRAMER, D.D.S. (College of Dentistry, New York University, 1924) and his co-author, SOPHIE KELNER, D.D.S. (The Dental School, Northwestern University, 1926) are engaged in research at Queens Hospital Center. They present in this issue the second installment of their three-part article, A NEW PHYSIOLOGIC METHOD FOR REPOSITIONING THE MANDIBLE.

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708 Church Street, Evanston, Illinois

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The Use of a Jig

TO ESTABLISH PARALLELISM

GEORGE F. EISENBRAND, D.D.S., Wilmette, Illinois

DIGEST

This article describes a procedure in which a jig is used to drill with accuracy a number of parallel holes for pin ledge inlays. The use of the jig may be modified to cut parallel grooves for three-quarter crowns.

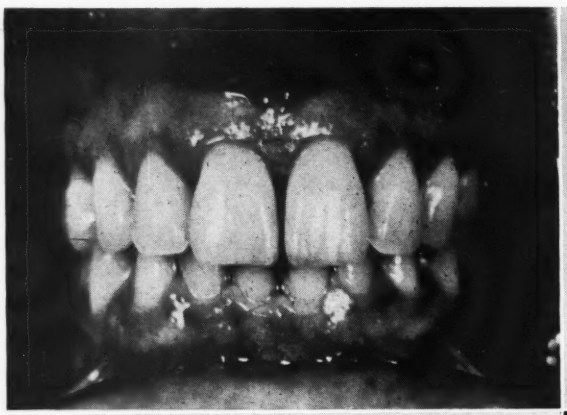
In the case presented the teeth were becoming loosened and the upper six anterior teeth were shifting labially. The x-rays showed considerable bone absorption, with beginning pocket formation. Bruxism was diagnosed as one of the contributing factors to the condition. Treatment consisted of resection, immobilization of the six upper anterior teeth, and the construction of a biteplate. This article deals with the construction of the jig used and the subsequent immobilization of the six upper anterior teeth.

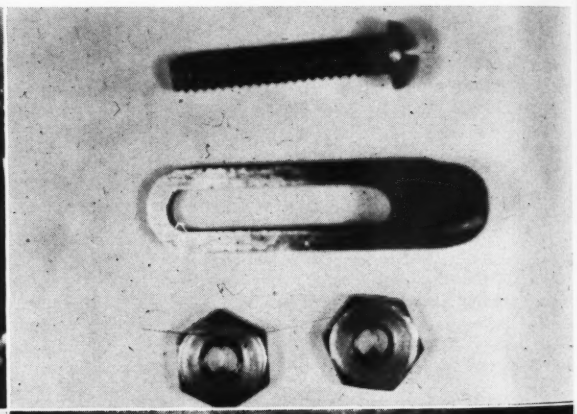
Description of Case

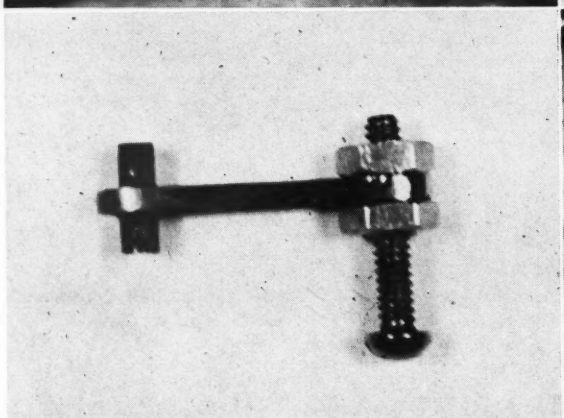
When first seen this case exhibited a diastema between the upper central teeth caused by shifting (Fig. 1).

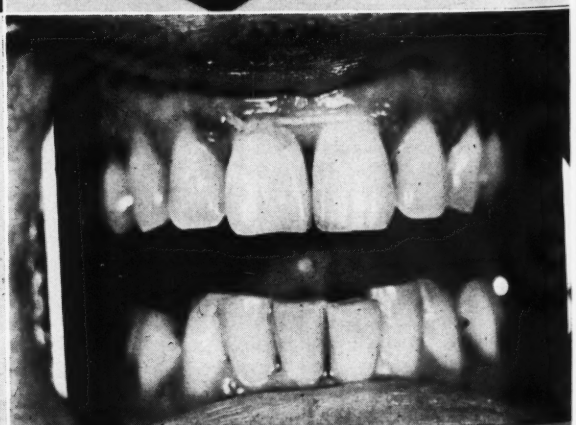
Component Parts of Jig

The metal parts of the jig, used in this procedure, consist of one stainless steel bolt No. 6-32 and two hexagon nuts to fit; and one piece of stainless steel or silver, 12 gauge, 30 millimeters long and 7 millimeters wide for







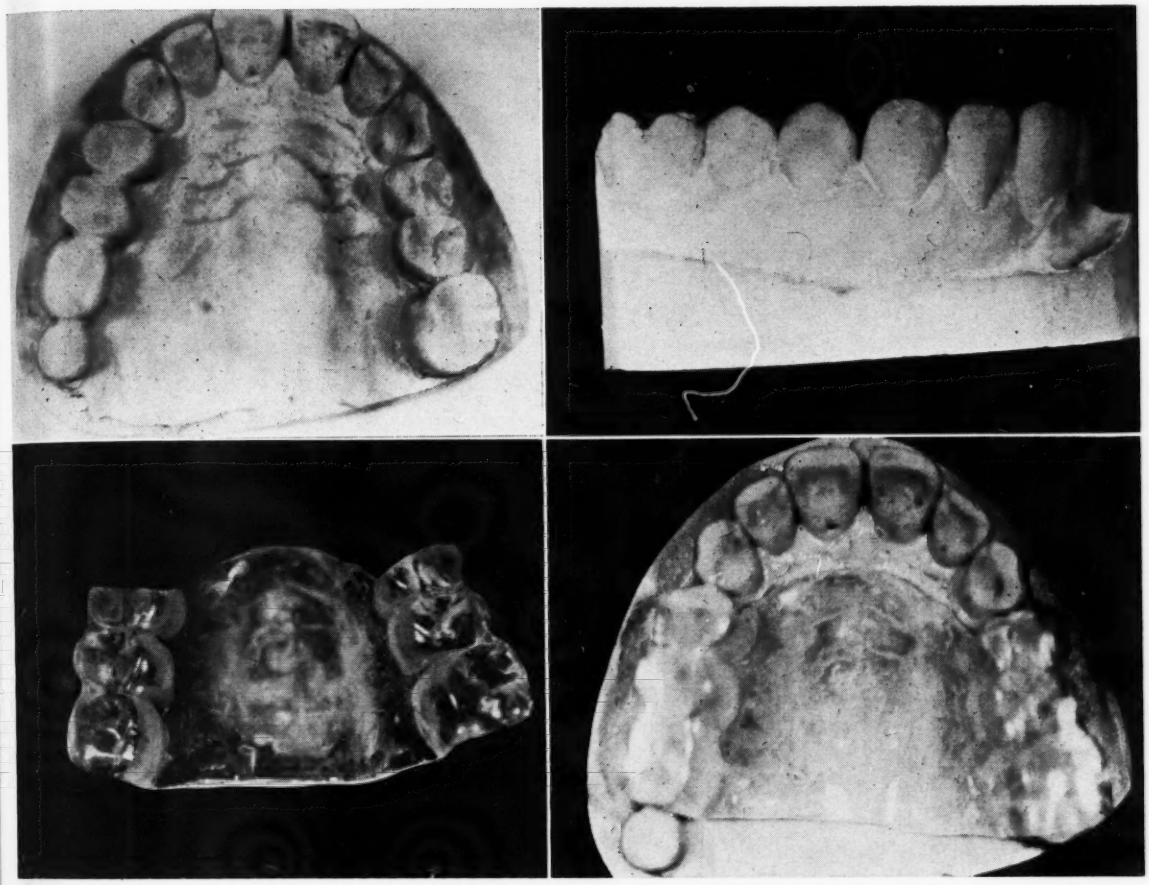


1 (top left).
The case when first seen. Diastema existed between the upper centrals due to labial shifting.

2 (bottom left).
Bolt, nuts, and slide are shown with bur tube soldered.

3 (top right).
Jig assembled.

4 (bottom right).
The diastema is reduced with grass line. This measure took about 48 hours. An impression was made of the complete upper jaw and a stone model poured.



5 (top left).
Stone model.

6 (top right).
Side view of the stone model.

7 (bottom left).
Baseplate of clear plastic.

8 (bottom right).
Baseplate on model.

the platform. This is slotted to take the bolt for 19 millimeters and drilled to take a bur tube from an old contra-angle, 10 millimeters long. The bur tube is centered and silver soldered vertically in the hole at the end of the platform (Figs. 2 and 3).

Reduction of Diastema

The abnormal space between the centrals was reduced by means of a grass line ligature. An impression was taken of the upper jaw and a stone model poured (Figs. 4, 5, and 6). The base of the model was ground until it was parallel to the occlusal plane.

A baseplate was made of clear plastic, covering the occlusal surfaces of the bicuspids, first molars, and palate, with a 3-millimeter clearance of the lingual surfaces of the six anteriors (Figs. 7 and 8).

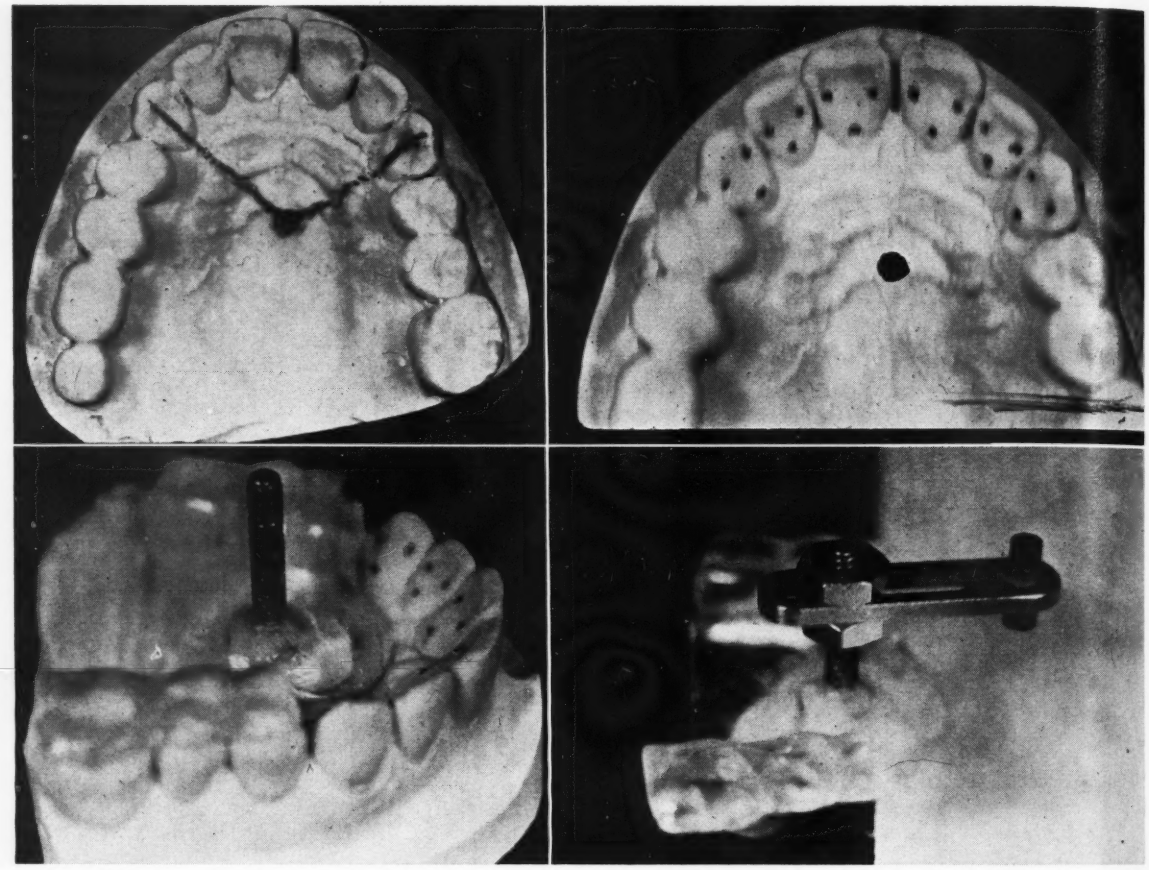
Determining Location of Post — The baseplate must fit the model and the mouth perfectly. Two lines are drawn on the model through the center of the labio-lingual diameter of the cuspids. The intersection determines the location of the post (Fig. 9).

Pin Holes and Post Location—The positions of the holes are marked on the model with a sharp pencil. In determining the location of the holes, the first consideration is protection of the pulp: (1) If there is a marked lingual inclination of the roots, the lingual hole should be situated as much to the lingual at the gingival as possible and drilled for less depth. (2) If the x-rays show that the pulp is large, the mesial and distal holes should be as near the outer edges of the tooth as possible (Fig. 10).

Bolt Attached to Baseplate — The head of the bolt is fastened to the baseplate with quick cure acrylic, vertically. The top must project 12 millimeters above the incisal plane (Figs. 11, 12, and 13).

Burs Placed in Contra-Angle — Three No. 700 burs are cut to lengths of 23, 24, and 25 millimeters respectively, and flattened by grinding on one side for 1½ millimeters on the end so they will engage the contra-angle drive, but not be held by the bur latch (Figs. 14, 15, and 16). These are put in the contra-angle and marked at the junction of the bur with the bur tube.

Burs Secured — One No. 2 handpiece round carbide bur is made, 23 millimeters long and flattened to engage the contra-angle. This is to start the holes by drilling through the enamel. This also eliminates any ten-



9 (top left).
Locating the position of the post.

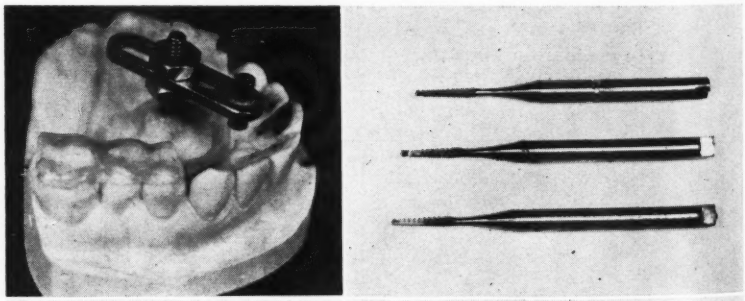
10 (top right).
Pin holes and post location shown on model.

11 (bottom left).
Bolt in position.

12 (bottom right).
Jig assembled.

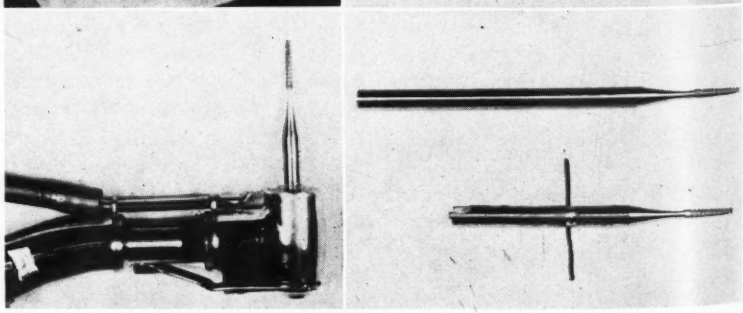
13 (top left).
Jig assembly on model.

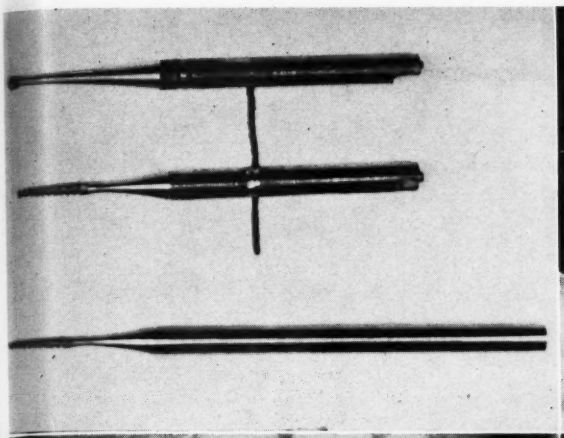
14 (top right).
Three No. 700 burs are shown cut to length with the sides ground flat.

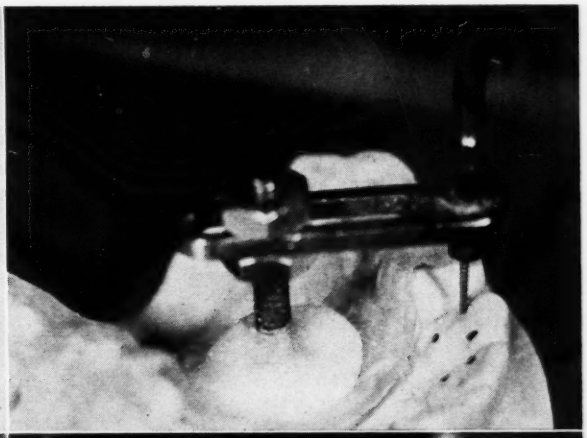


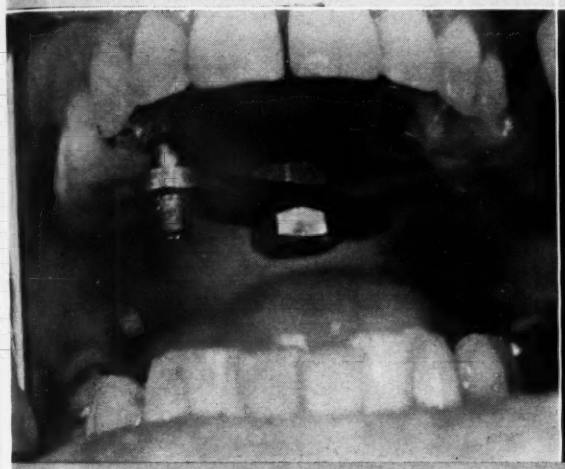
15 (bottom left).
Bur in the contra-angle, marked at the junction.

16 (bottom right).
Showing the groove on the short bur to mark length of the projection from the contra-angle.









17 (top left).
A No. 2 round carbide bur was made.

18 (top right).
The jig set up on the model for the first hole.

19 (bottom left).
The jig is transferred to the mouth.

20 (bottom right).
Case waxed and sprued.

dency of the No. 700 burs to move laterally when the final drilling is done (Fig. 17).

Jig Placed in Position—The entire jig is set on the model, a bur is put in the tube, the point set on the first hole to be drilled, and the arm locked by tightening the nuts. The arm can be raised or lowered by raising or lowering the nuts. The amount of projection of the marked part of the bur above the bur tube will determine the depth of the hole. With three burs of different lengths, the most suitable one for length can be used, and any minor adjustments can be made by raising or lowering the nuts. In this case the holes were made 2 millimeters deep (Fig. 18).

Jig Transferred to Mouth — The teeth can be done one or two at a time or all six can be done at once.

The lingual surface of the first tooth is ground uniformly to a depth of approximately ½ millimeter; the jig is transferred to the mouth, and the bur placed in it to verify the exact placement of the hole (Fig. 19).

Procedure for Drilling Holes

1. Before drilling the shanks of the bur are lightly oiled. The hole is started with the No. 2 bur to about ½ its diameter in depth, being sure the enamel is penetrated and leaving a pit to start the No. 700 bur.

2. The selected No. 700 bur is put in the angle and the hole drilled. The tube acts as a stop against the angle when the exact predetermined depth has been reached.

3. The holes are drilled one at a time by replacing the baseplate on the model and setting up the position of the bur for the next hole on the model, placing in the mouth for examination, and repeating until all 18 holes are drilled.

Taking the Impression

For this procedure the following steps are taken:

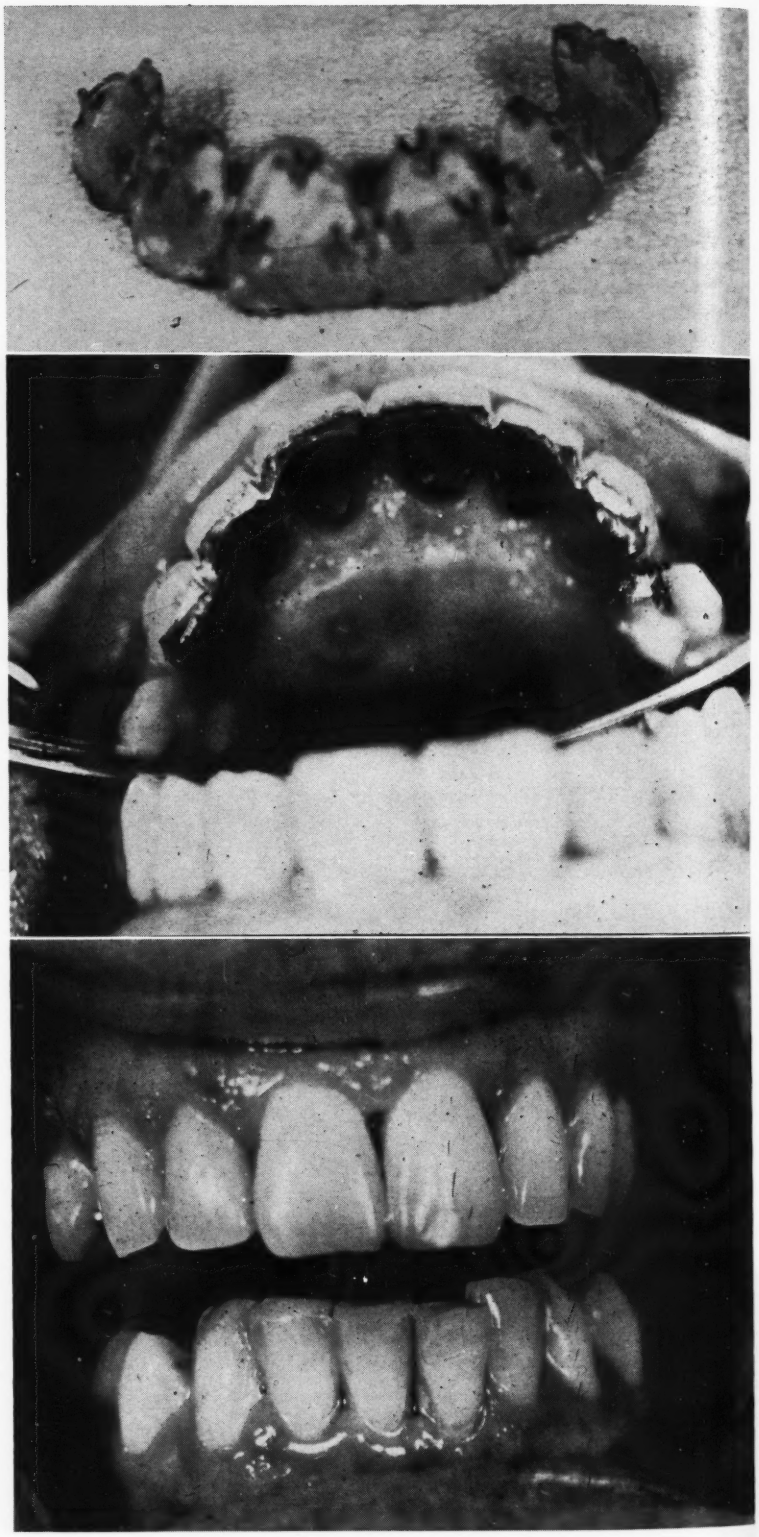
(1) 18 Williams plastic pins for pin ledge inlays are cut from the block, the large ends dipped in rubber elastic impression adhesive, and laid on waxed paper.

(2) A quick curing custom plastic tray is made covering the lingual of

21 (top).
Finished casting.

22 (center).
Case cemented.

23 (bottom).
Labial view.



the anteriors, but only 1 millimeter of the labials.

(3) The pins are placed in the holes, the area dried, and an impression taken. The adhesive on the pins assures their removal with the impression.

(4) The model is poured in the selected casting investment and the case waxed directly on the model and sprued (Fig. 20).

Completing Procedure

The case is invested, burned out, cast against the original investment model, cleaned, and tried in the mouth (Figs. 21, 22, and 23). Because the holes are exactly parallel and the case cast in one piece against the original model, it will fit perfectly.

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A NEW PHYSIOLOGIC METHOD

for Repositioning the Mandible—Part Two

A. G. KRAMER, D.D.S.*, and SOPHIE KELNER, D.D.S.**, New York

DIGEST

The aluminum-acrylic bridge will eventually be utilized to record physiologic rest, a new vertical position, and freeway space. It will also be utilized to create new reflex patterns and to eliminate old perverse patterns. This article which is the second of a series of three presents the step-by-step procedure for the aluminum-acrylic crown which is to be part of the aluminum acrylic bridge with the built-in bite plane and the method employed for recording the new vertical, physiologic rest, and freeway space. The method by which the repositioned mandible is maintained in place is described.

Technique for Making Aluminum-Acrylic Crown

Study models in duplicate are made of the case and poured in stone. Color, size, and mold of the acrylic teeth (Fig. 13) needed are selected in readiness for the next appointment. To complete the technique for the aluminum-acrylic crown the following steps are taken:

(1) Starting with the cuspids both upper and lower, the teeth are prepared as for jacket crowns; that is, with a shoulder mesially, distally, and labially. (If the lowers are in good position relative to the uppers, they are left intact.) If a particular case does not permit a shoulder, a chamfer bevel is acceptable.

(2) Choose a soft aluminum shell of proper size to fit the prepared tooth.

(3) The aluminum shell is contoured on the prepared tooth to fit snugly, (Fig. 14) using a large orthodontic foot plugger (Fig. 15) and crown-forming pliers (Fig. 16). The serrations made by the foot pluggers will act as retention areas for the acrylic.

(4) When satisfied with the fit of the aluminum thimble, (Fig. 14) grind the lingual aspects (Fig. 17) of the two upper cuspid acrylic teeth selected for the case until they are hollow (Fig. 17A), leaving untouched the linguo-incisal third and the mesio and disto-proximal surfaces.

(5) The hollowed-out tooth is tried on the labial aspect of the aluminum thimble (Figs. 17C and 17D) in the patient's mouth. When satisfied as to fit the thimble is cleaned with running hot water and dried.

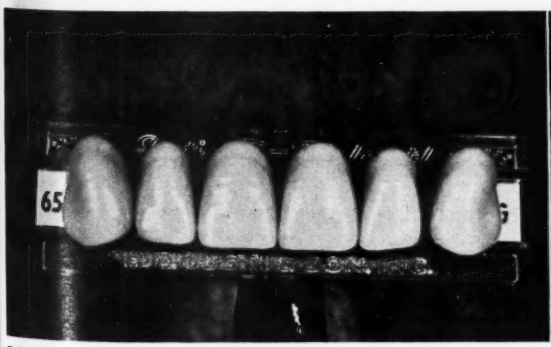
(6) While on the tooth a thin mix of acrylic is painted on the labial surface of the aluminum thimble and on the ground-out lingual surface of the acrylic tooth. While the lip is deflected, the tooth is placed on the aluminum thimble, the inciso-axial inclination is determined in order to give the mandibular teeth ease of function especially in protrusive movement. While the tooth is in position a gentle blast of warm air is directed toward the newly placed acrylic to encourage hardening.

(7) When hardened the thimble and the attached tooth are removed from the preparation in the mouth and again cleaned in running hot water.

(8) The entire tooth is dried and a piece of Kerr's luting wax (Fig. 17E) is placed into the hollow surface of the thimble with about two inches protruding from the gingival periphery of the crown. The operator holds this extension of wax between the thumb and forefingers of the left hand and uses it as a potter's wheel to facilitate the rotation of the tooth in every direction. With the free hand freshly mixed acrylic can be brushed on wherever it is needed lingually.

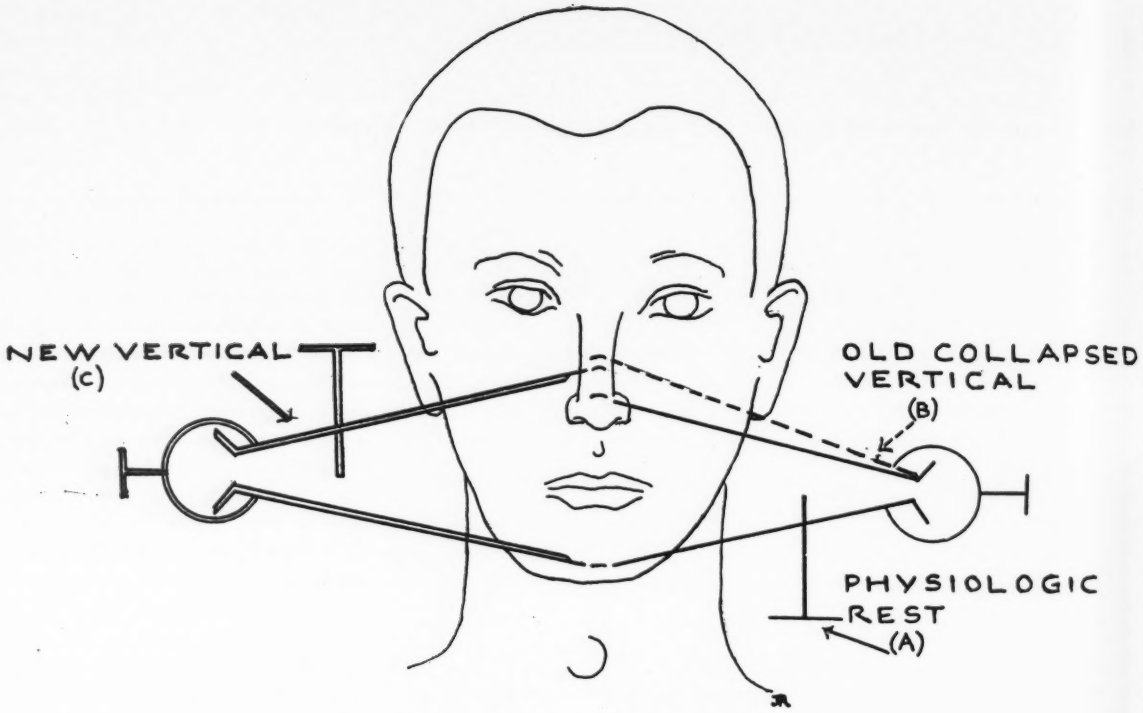
(9) The acrylic is made semihard with the use of hot air. Before complete setting takes place the crown is returned to the tooth and the patient is asked to close according to his old bite. The registration on the lower op-

*Associate Visiting Dentist (Rehabilitation) Thoracic Division, Queens Hospital Center.
**Assistant Visiting Dentist, Thoracic Division, Queens Hospital Center.
Note: Drawings A and B were made by Judy Rosenberg.



13.
Acrylic prosthetic teeth.

14.
Contoured aluminum thimble.



Drawing A—Front view: A. Physiologic rest position obtained at the terminus of the swallow. B. Old collapsed vertical, obtained when the opposing teeth meet in centric occlusion. C. The new vertical is 2½ millimeters below the collapsed vertical. This represents the new occlusal vertical level to which the bite plane is to be built.

posing teeth is made into the acrylic lingual of the upper crown. The acrylic is allowed to set by the use of warm air and then removed and put into hot water for final setting.

(10) The same procedure is completed with respect to the other cuspid.

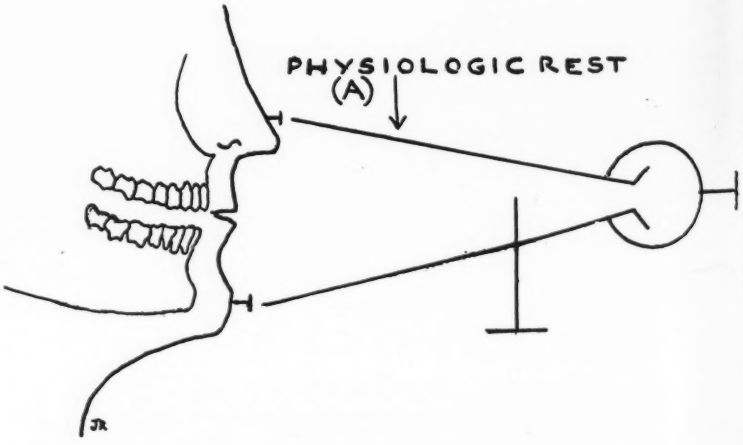
(11) The two upper crowns are polished with Burlew discs and rag wheel, with flour of pumice, and finally with whiting to give a final sheen to the finished product.

(12) When both upper cuspids are finished, they are cemented with a temporary cement containing the following ingredients:

Formula (liquid)
Oil of cloves 300 grams
Canadian Balsam 175 grams
Peru Balsam 25 grams
Sufficient quantity to make 500 grams
Powder
Zinc oxide to be mixed with formula liquid.

(13) When the upper centrals and laterals are present the same procedure is used. If they are missing, however, acrylic teeth are substituted and attached to the cuspids with self-curing acrylic (Fig. 17B).

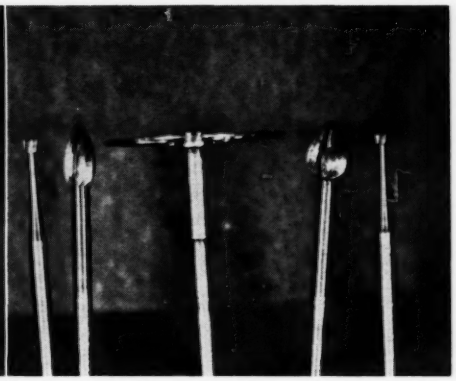
(14) If the lower anterior segment has not collapsed too much lingually, that is, if the teeth are fairly upright in their axial position they are not disturbed. If they are not in good position similar preparations are made on the lower cuspids and similar crowns constructed and temporarily cemented into position.



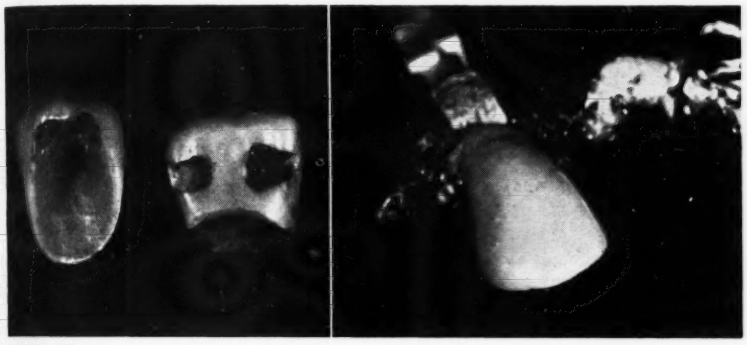
Drawing B—Lateral view: A. Physiologic rest position obtained at the terminus of the swallow when the larynx has made its complete descent. Note freeway space (interocclusal space).

15.
Orthodontic foot plugger.

16.
Crown-forming instrument.

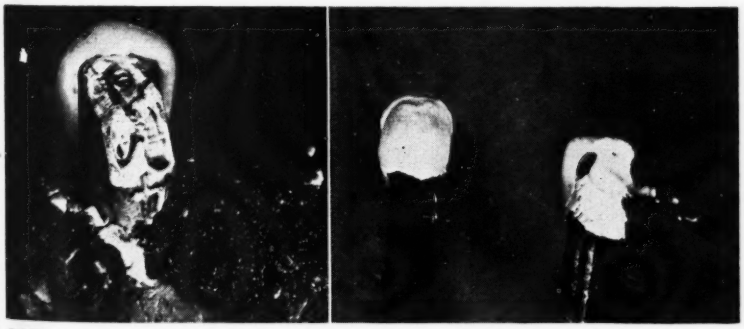


17.
Instruments for grinding lingual aspects of cuspids.



17A. B.
Ground-out lingual surface.
Undercuts in lingual proximal surface for attachment to abutments.

17C.
Ground-out cuspid fitted on labial aspect of aluminum thimble.



17D.
Lingual aspect showing hollowed-out tooth ready to be attached to aluminum thimble.

17E.
Lingual aspect showing luting wax and final "paint on" of self-cure acrylic (Kadon®) to complete crown.

Method for Recording New Vertical, Physiologic Rest, Freeway Space

1. A mark is made with soft lead pencil on the firm part of the tip of the nose and chin. The patient is requested to stand in a relaxed position and asked to swallow. When the larynx has made its complete descent at the termination of the swallow calipers are placed against the marks on nose and chin and measurements are taken and recorded (Drawing A) for future reference. This represents physiologic rest which includes in its measurement the freeway or interocclusal space (A).

2. The patient is asked to close at the old collapsed vertical level and the open calipers, at the same distance as at physiologic rest, are placed with the lower end of the instrument against the chin mark; the upper part of the caliper will now register above the mark initially made on the nose (Fig. B, front view). This new mark will be the old vertical.

3. The distance between the nose marks indicates the freeway space when the mouth is open at physiologic rest.

4. The measurement between the two nose marks is now recorded. In a severely collapsed case this measurement may be 8 millimeters. Deduct 2½ or 3 millimeters for the freeway space and place a third mark on the nose. This mark will represent a new vertical (C).

5. To make the bite plane for the bridge in the upper jaw, serrate the lingual aspect with an inverted cone bur. The bridge is placed in the patient's mouth.

6. A fresh amount of acrylic is prepared to a somewhat doughy consistency, attached to the linguals of the upper teeth with a softer mix, and fashioned empirically into a bite-plane.

7. The patient, standing, is told to close gently and slowly until the cali-

per marks show the lower end of the caliper on the chin mark and the upper end at the new vertical which is the last or middle mark made on the nose.

8. If the lower teeth are made of acrylic, they should be lubricated thoroughly before biting into the soft acrylic of the bite plane.

9. No further pressure is applied by the mandibular teeth. The acrylic bridge is hardened by a gentle blast of warm air, removed from the mouth, and finally hardened by dipping into hot water.

Final Steps—1. Any flash made by compression of the acrylic by the incisal edges of the lower anterior teeth is removed mesiodistally and anteroposteriorly to assure smooth functioning of the mandibular teeth against the biteplane in the various excursions.

2. The bridge is removed and polished with vulcanite burs, rubber wheels, and finally on the lathe with rag wheel, flour of pumice, and whiting. It is then cemented with temporary cement.

New Vertical Maintained — After the patient has worn the anterior bridge with the posteriors in noncontact for a month, the temporary aluminum crowns for the posterior segments are constructed to the level of the new vertical as established by the repositioned mandible. This construction, starting with the lower posterior elements, should be made bilaterally at the same sitting in order to maintain accuracy of the mandibular position.

Further Correction Encouraged — Proprioception is involved again posteriorly through occlusal contact, encouraging the jaw to further self-correction.

(End of Part Two)

57 *West 57th Street*

IMMUNOLOGY IN CANCER

GILES A. KOELSCHE, M.D., Rochester, Minnesota

Evidence is accumulating that suggests that immunologic factors play a role in the development of, and resistance to, cancer. Homografts of malignant tumors are rejected and undergo second set reactions as do those of healthy tissue. They are accepted under normal conditions only by members genetically identical to, or highly imbred from, the strain from which the graft has come.

Possible Breakdown of Mechanism —Antigenic material present in tumors has been found to differ somewhat from that found in normal tissue. Serum gammaglobulins are increased in moderately advanced malignant disease, suggesting an immune factor in resistance to cancer. Their tendency to decrease as the disease progresses to preterminal stage suggests a breakdown of this mechanism.

Spontaneous Regression — The spontaneous regression of established tumors, the prolonged survival of some patients after incomplete removal of their cancers and finally the sudden appearance of widespread metastatic lesions many years after successful treatment of the primary lesion all suggest strong power of restraint by the immunologic mechanism of the patient.

Mutation of Cells—It has been estimated that as many as 1,000,000 body cells per day may undergo mutation. Only those mutants similar to the host's cells would have a chance to develop into a tumor because the immune response against such cells would be weak. This in turn would be true because their self-identity markers would be so similar to the host's that they would not be recognized as foreign and thus would not be antigenic.

Immunologic Tolerance Induced— Experimentally induced immunologic tolerance will permit malignant cells to grow in animals that otherwise would be able to reject them by the homograft reaction. Malignant disease often occurs in members of the same family through several generations. The explanation may be that the offspring inherit parental malignancy genes, and that these genes render the descendants immunologically tolerant to cancer cells so that the latter are not subject to the homograft rejection reaction, that is, to containment and destruction.

Future Application in Treatment

It is reasonable to hope that continuing research in the realm of immunology, especially as it relates to the development and course of malignant disease, may in the future be brought to bear more effectively in the treatment of cancer.

Adapted from *Staff Meetings of the Mayo Clinic* **36**:286 (June 7) 1961.

Clinical Report on Buclamase®:

A NEW DRUG TO CONTROL INFLAMMATION

R. O. BEAUCHAMP, D.D.S., Stillwater, Oklahoma

DIGEST

This article reports the results of a clinical test in the use of a new drug for the control of inflammation in dental procedures. In this experience an enzyme agent, Buclamase® was applied in a variety of pathologic conditions and was found to be entirely efficacious.

Problem of Inflammation

The control of inflammation is a common problem in dentistry. Inflammation either from infection or trauma is a hindrance to rapid healing and recovery and may become serious. Inflammation causes discomfort to the patient, and failure to control it can present difficulties to the dentist.

Antibiotics Valuable Aid—The use of antibiotics has been extremely helpful in the control of inflammation. These valuable aids, however, have limitations. Some patients are allergic to them; others object to the injection procedure. Oral administration may be used but this form of medication is slower and somewhat less effective. Side effects such as nausea have been noted.

Research on Buccal Enzymes—Considerable investigation has been conducted during recent years on the value of buccal enzymes. These preparations have proved fairly successful in reducing inflammation. There have been instances of irritation, however, at the site of placement of the enzyme tablet.

New Enzyme Tested

In clinical tests with a new enzyme (alpha amylase*) satisfactory results have been obtained without any occurrence of the customary side effects. Various types of inflammatory conditions were successfully controlled: (1) Severe inflammation resulting from periapical abscesses, deep periodontal pockets, (2) pericoronitis around third molars, (3) trauma following extractions or extensive alveolectomies, (4) removal of third molars, (5) endodontic procedures, (6) deep scaling, (7) teeth having pathologic exposure in which the pulp became involved after capping, (8) canker sores, (9) Vincent's infection.

Materials and Methods

Description of Agent—Alpha amylase is an enzyme whose characteristic activity is to depolymerize starch. The particular enzyme contained in the buccal tablets used in this clinical series is produced by a strain of nonpathogenic bacteria (b. subtilis), and is similar in its properties to the ptyalin of human saliva. It is tasteless and bland. Successful use of these buccal amylase tablets in inflammatory conditions has been reported in both the dental and the medical literature.[1, 2] Various forms of alpha amylase have been used extensively to aid digestion.

Method of Administration — The buccal enzyme tablet is placed under the lip, either upper or lower, in the cuspid or bicuspid area, although the exact location does not make much difference. In the majority of cases one buccal enzyme tablet three times daily, under the lip, was sufficient to reduce inflammatory conditions within forty-eight to seventy-two hours. In the treatment of cellulitis, and in certain severe cases in other categories, a maximum of two tablets four times daily was required. In no case was irritation noted at the site where the tablets were used.

Results Obtained

A number of cases in which there were multiple extractions of from three to ten teeth at one sitting, followed by rather extensive alveolectomy, were treated. In every case healing was satisfactory, and there was little postoperative pain or swelling. In some of these patients there had been previous extractions, followed with antibiotics. Generally speaking, the antibiotics had performed well, as is usually the case, but in most instances the results obtained with the buccal enzyme were markedly better. Healing was more rapid, and there was less inflammation and swelling. In some cases the buccal enzyme tablets were used in conjunction with penicillin with excellent results.

Treatment of Pulpitis—Seven cases of pulpitis were treated. One case involved a tooth under a three-quarter crown which had been in place for several years. The tooth was elongated and sensitive to percussion. The patient was started on buccal enzyme tablets, one taken orally each day. Gradual improvement was observed after the first day. Two days after starting the medication the patient

*Alpha amylase under the trade name of Buclamase® is manufactured by the Rystan Company, Mount Vernon, New York.

[1]Thompson, Walter A. L.; Glick, Irving V.; Silverstein, David C.: Buccal Amylase; New Anti-inflammatory Agent, Clin. Orthoped. **18**:244-249, 1960.

[2]Monica, Woodrow S.: Alpha Amylase As An Anti-inflamant In Dentistry, Acad. M. N. J. **5**: 137-141 (December) 1959.

TABLE I

Dental conditions successfully treated with buccal amylase tablets

Abscess	Gingivitis (pregnancy)	Toothache (recent restoration)
Alveolectomy	Immediate dentures	Toothache (unlocalized)
Aphthous ulcer	Pericoronitis	Traumatic ulcer-biting lip
Extractions	Periodontitis	under anesthesia
Gingivitis (acute)	Pulpitis	Vincent's infection

could close on the tooth without pain. Six days later the tooth was scarcely sensitive.

Application in Exodontia—In one patient considerable swelling and pain in the soft tissues immediately around the socket remained a month after removal of the upper right third molar. The area had been treated previously with gentian violet with poor results. Within two days after the use of the buccal enzyme tablets the tissue was about normal, and the patient was free from pain.

Incident of Aphthous Ulcer or Canker Sores—In cases treated for this lesion relief was noted within twenty-four hours without exception. One patient had previously had four penicillin injections with unsatisfactory results; with buccal enzyme therapy relief was obtained after the first day. After the fourth day the ulcer was completely healed.

Inflammation in Pericoronitis — Treatment of this condition was responsive. Even in cases of deep severe swelling pain disappeared promptly after initiating buccal enzyme treatment. Swelling usually disappeared after the third or fourth day.

Side Reactions Noted—The one case in which side reactions were observed was a pulpitis in the lower right cuspid. The pulp had been capped in the tooth several days earlier. Discomfort was present after the third day. The buccal enzyme tablets were given, one internally daily. After the second day they were discontinued because of nausea. The root canal was filled; during the process of treating the tooth and placing the restoration the buccal enzyme tablets were tried again to determine whether they were the cause of the nausea. The nausea recurred.

The case described above was the only one in which there was any indication of side reaction. In no case was the medication ineffective.

Discussion

Wide Variety of Uses—Perhaps the most striking aspect of this clinical experience has been the wide variety of situations in which control of inflammation has been significantly beneficial (Table I). The importance of avoiding swelling and pain after extractions is self-evident. But the rapid and positive control of such conditions as aphthous ulcers with the buccal amylase tablets is worthy of special note. Since the buccal enzyme has no known antibiotic or antiviral effect, it must be concluded that an inflammatory reaction figures prominently in prolonging these conditions. Control of this reaction brings prompt recovery.

Dramatic Results in Vincent's Infection—It is recognized that the general condition of the patient influences susceptibility to this infection; this might be construed to mean that normally reacting tissue will not support growth of the organism. It would be premature to suggest on the basis of this limited experience that antibacterial therapy might be eliminated. The indication of tissue reactivity, however, as an important element in the propagation of this disease is striking. The rapid disappearance of discomfort that was demonstrated with the use of the buccal amylase tablets is seldom encountered.

Effectiveness of New Agent Demonstrated—It is apparent from this experience that a trouble-free agent which controls inflammation finds numerous useful applications in dental practice. Buccal amylase would appear to be such an agent. It is an effective and versatile addition to established dental medicaments.

119 *West 7th Avenue*

Psychiatric Contributions to the Clinical Management of Plastic-Surgery Patients

WAYNE E. JACOBSON, M.D., EUGENE MEYER, M.D., and MILTON T. EDGERTON, M.D.

Discussion

There are two major areas of medical concern in dealing with the plastic-surgery patient: (1) the *anatomic deformity* existing as the consequence of genetic, infectious, neoplastic or traumatic processes, (2) the sense of *deformity*, an intense personal experience of the patient.

Involvement in Problems—Because of the nature of human growth and development, the human body is inherently involved in many psychosocial problems of living. The surgeon has no choice as to *whether* he will or will not be involved in both areas. His only choice is *how* he will be involved. Awareness that there is more involved than meets the eye, curiosity about natural phenomena, whether psychologic or anatomic, and utilization of knowledge from other medical specialties all increase the effectiveness of his intervention.

Contributions to Clinical Management—Application of relevant therapeutic principles to the problem of the moment constitutes the art of medicine. Contributions from clinical psychiatry to the clinical management of plastic-surgery patients are germane to problems of diagnosis, decisions about operating, patient preparation, post-operative care, patient survival, doctor-patient relationships, and evaluation of the surgical results.

Adapted from *Postgraduate Medicine* **29**:520 (May) 1961.

PRECISE BURNISHED CROWNS

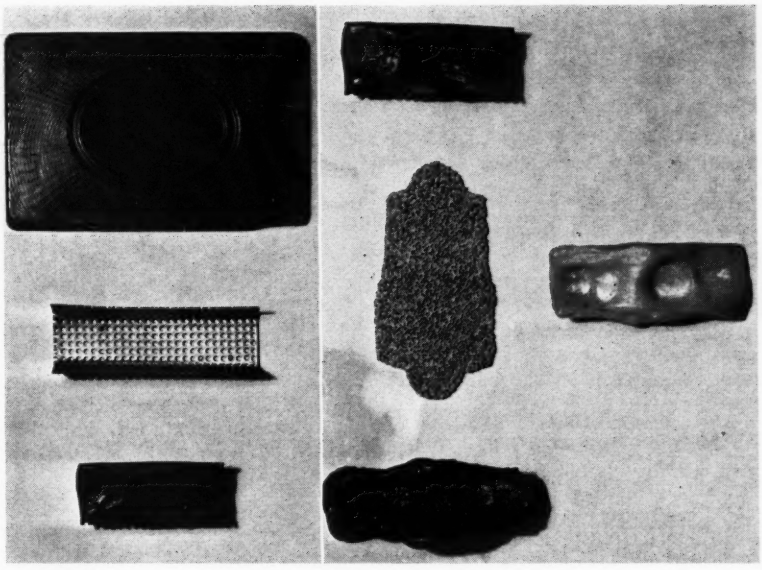
Using Metal-Faced Models

P. C. NORDLINGER, D.D.S., Little Rock, Arkansas

DIGEST

For many years the gold shell crown has had a reputation for durability and long wear. At the height of their popularity, even when improperly fitted these crowns preserved the teeth longer than any other comparable type of restoration. Because of the difficulty in obtaining excellent fit and the irritation that resulted at the gingival margins these crowns went out of favor and most dental schools do not even teach this technique.

The gold crown, however, can return to usefulness if it is made to fit precisely at the cervical margin. It will compare favorably with any type of cast restoration now employed. In practical experience it has proved superior in most instances: the important step in perfecting the technique is the final burnishing against a metal-faced model. This article presents a step-by-step technique for making a successful gold shell crown.



1 (left).
Heat compound and place in perforated tray.
2 (right).
A foam rubber spacer is placed over the tray of warm compound. Make a registration.

Advantages

The following are some of the advantages of the gold shell crown:

1. Minimum removal of tooth structure is required.
2. No shoulder preparation is required.
3. Much speedier preparation is obtained.
4. No postoperative complications such as thermal shock result.
5. Preparation produces less shock to the patient's nervous system.
6. No irritation of the gingival tissues occurs.
7. They supply greater strength than three-quarter crowns for bridges.
8. Parallelism problems in bridge construction are reduced.
9. Greater longevity is provided by this type of coverage.

Technique

The following steps may be taken to complete the procedure:

1. Heat compound, place in perforated or crown and bridge tray, and insert tray over the prepared area. Remove from mouth (Fig. 1).

2. Take a foam rubber spacer from boiling water, place over the tray which contains the compound (the spacer covers only the prepared tooth and the two approximating teeth).

3 (top).
Take impression with silicone.

4 (bottom).
Copper-plate impression.

Place in the patient's mouth and chill. Remove from mouth, dip in cold water, and remove the spacer. While the assistant is drying the tray, the wax bite may be taken. This can be done by taking the metal from an x-ray film and placing it between two pieces of base wax (Fig. 2).

3. Mix silicone impression paste, fill the syringe, and using the syringe, cover the prepared teeth with the silicone. The rest of the same mix is placed in the tray and then placed over the silicone-covered preparations. Allow to set; remove (Fig. 3).

4. Mount the tray on an electrode and fasten with utility wax. Coat with Hanau's Flash or Metalizing Paste. Place in copper-plating bath. Set the dial for 4 to 5 milliamperes. Leave in the copper bath 6 to 8 hours or overnight to ensure a good coat (Fig. 4).

5. After coating, remove from electrode. Box with boxing wax and pour in stone (Fig. 5).

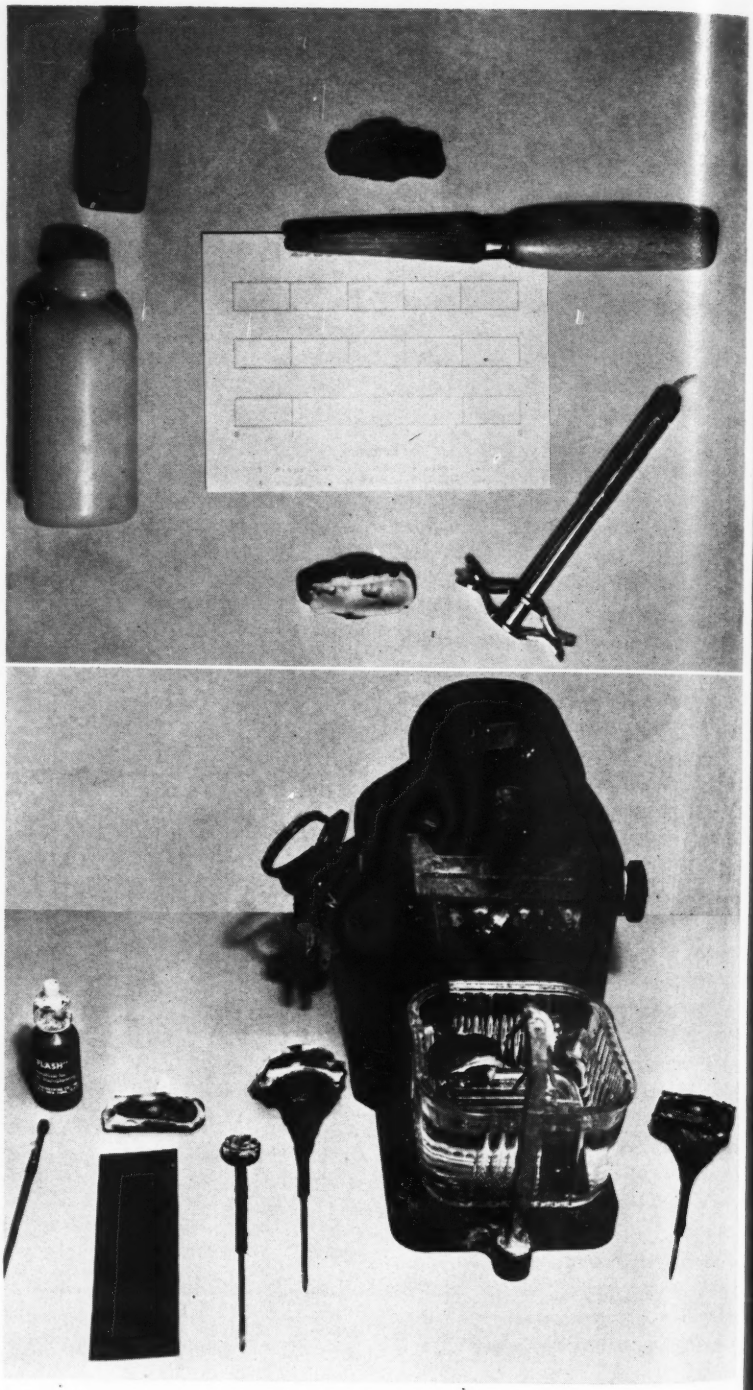
6. After the stone has set the model is ready to be mounted on the articulator.

7. Mount on the articulator, using the wax bite, dually, as the impression of the opposing arch for bite registration.

8. On the mounted models, fabricate the shell crowns. If the crowns are sent to a laboratory, it is wise to suggest the proper gauge of gold. 30-gauge is preferred. If a swaged cusp is desired, 28-gauge gold is suggested. It is wise to flow solder underneath the cusps as a reinforcement. When cast cusps are used this is unnecessary.

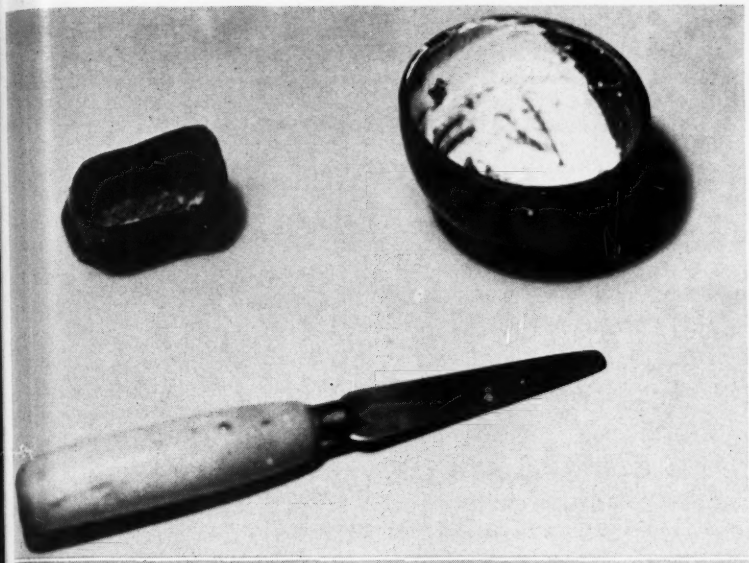
Final Step

The last step, but the most important, is burnishing the crown. Using pointed instruments of various shapes, the crown is burnished all around the gingivae. This will make it possible to obtain a valve seal. Burnishers may be made from old operative instruments which are shaped. Burnishing the gold band against a metal-faced model ensures a long-lasting durable crown (Fig. 6).



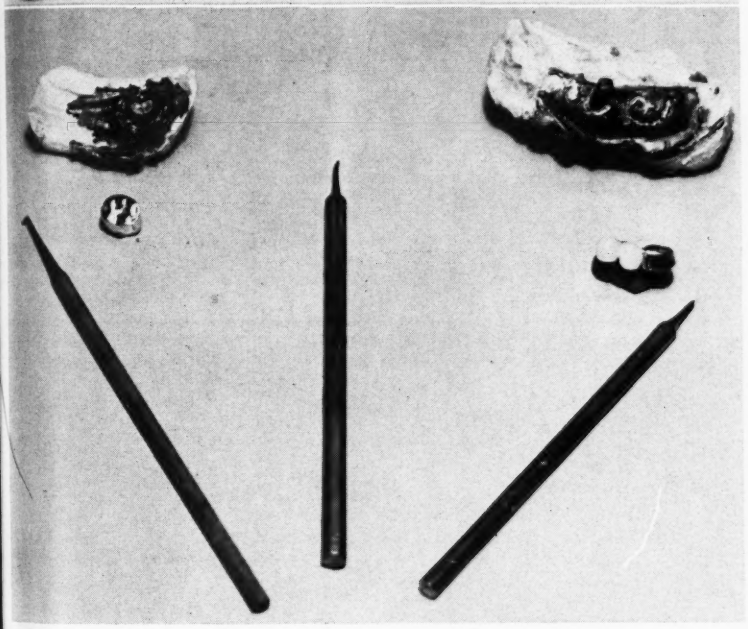
Summary

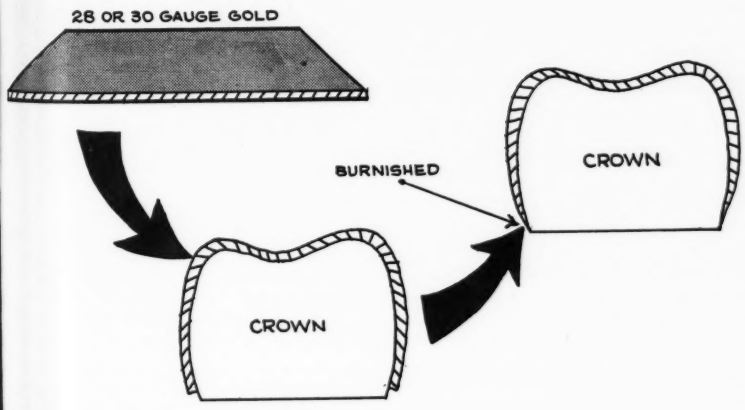
Any procedure that lends itself to high speed technique must be considered favorably. A procedure that reduces operator and patient fatigue is desirable. I have been using burnished fitted crowns long enough to evaluate their advantages. Excellent periodontal conditions a year or a year and a half after placement of these restorations have been noted. With proper hygiene periodontal health can be main-



5 (top).
Box copper-plate impression and pour in stone.

6 (center).
Crowns fabricated and burnished.





7.
Shows the gingival margin of the gold crown on the metal model.

tained indefinitely. By resecting gingival tissue in so-called terminally involved teeth that would formerly have been lost crowns can be constructed and extractions can be materially reduced in practice. Esthetic bridgework can be produced for the anterior or posterior part of the mouth by the simple expedient of making slices through the labial or buccal aspects of the crowns and applying plastic (under high heat, 350 degrees Fahrenheit) to create a veneer.

115 *East Capitol*

Surgery As Placebo

HENRY K. BEECHER, M.D., Boston

A placebo effect has been demonstrated for surgery. While one must be cautious, there is evidence in surgery, as in other fields, that the enthusiast actually gets results which are better than those of the sceptic. There are data to indicate that one can, and surgeons must, test their new procedures when value judgments are involved, so as to eliminate the effect of bias in their conclusions. The short life cycle (2 years in this country from enthusiastic acceptance to discredit) of the treatment of angina pectoris by internal mammary artery ligation demonstrates how swiftly the proper design of study can answer difficult questions about the value of such a procedure. One may question the moral or ethical right to continue with casual or unplanned new surgical procedures—procedures which may encompass no more than a placebo effect—when those procedures are costly of time and money, and dangerous to health or life.

From *Journal of the American Medical Association* **176**:92 (July 1) 1961.

ELECTRODEPOSITION

of Topical Fluorides

HENRY C. HEIMANSOHN, D.D.S., Danville, Indiana

DIGEST

This article describes a method for the application of fluoride which is accomplished by using the teeth as the negative plate of a battery and tin foil as the positive plate with the stannous fluoride as the electrolyte or battery fluid. The method which is based on the same chemical principle as that used for cleaning silverware in the home is essentially simple and requires no extra dental equipment.

New Method Evolved

The feasibility of using direct current from a flashlight battery to plate on fluoride was considered. This, however, introduced additional problems, patient discomfort, and supplemental apparatus was required. It is usually true that the simpler a process is, the more likely dentists are to accept it. Further study produced a method of deposition of fluoride on the teeth with an electric potential, without using additional equipment outside the mouth. This can be done by constructing a battery in the mouth, using the tooth itself as the negative plate and another metal plate (tin foil) as the positive plate with the stannous fluoride as the electrolyte (battery) liquid. The chief advantages of this method of topical fluoride application are the following:

(1) More effective fluoride application into pits and grooves where present procedures probably do not permit entrance of the solution because of capillary attraction.

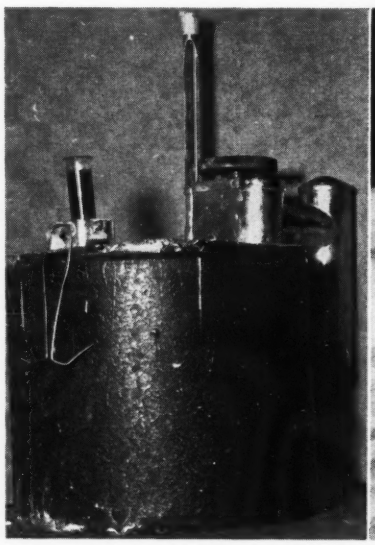
(2) Less time is required than the usual four minutes per quadrant.

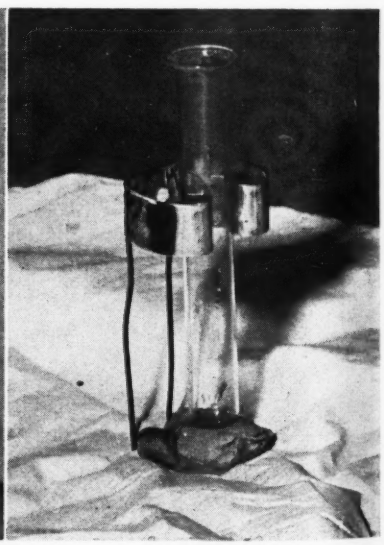
(3) More effective and deeper than 1/1000-inch present depth of incorporation into enamel surfaces is obtained.

Household Use of New Technique

This technique is commonly used in the home to clean silverware electrically. The physics and chemistry of the new recommended electric deposition of topical fluorides can be easily understood as the basic principles are the same in both techniques.

Method—The tarnished silverware is placed in a zinc or aluminum pan and covered with a solution of salt. The solution is then boiled. In this process, the reaction is an electrolytic one, that is, it is effected by the action of an electric current, the pan or kettle serving as the negative pole, the silver article as the positive pole, and the salt solution as the battery solution or electrolyte. The film of silver sulphide on the article is removed by electroly-





1 (left).
Ordinary compound heater used to heat fluoride solution in a test tube. The heater is filled with water as usual and the clip holds the test tube vertically in a water bath arrangement. In this picture dye has been added to the solution in the test tube for photographic purposes.

2 (right).
Detailed photograph of broom clip with wire holder soldered to back. It holds the test tube upright in the water of the compound heater. The stiff wires merely act as supports on the outside of the heater.

TABLE 1
ELECTROMOTIVE SERIES OF THE METALS

Metal	Chemical Symbol	Electrode Potential (Volts)
Lithium	Li	−3.02
Potassium	K	−2.92
Barium	Ba	−2.90
Sodium	Na	−2.71
Calcium	Ca	−2.5
Aluminum	Al	−1.67
Zinc	Zn	−0.76
Chromium	Cr	−0.71
Iron	Fe	−0.44
Nickel	Ni	−0.25
Tin	Sn	−0.14
Lead	Pb	−0.13
Hydrogen	H	.00
Bismuth	Bi	+ .020
Copper	Cu	+ .034
Silver	Ag	+ .080
Mercury	Hg	+ .085
Gold	Au	+1.68

sis; that is, it is deposited on the zinc or aluminum pan by electrolytic action.

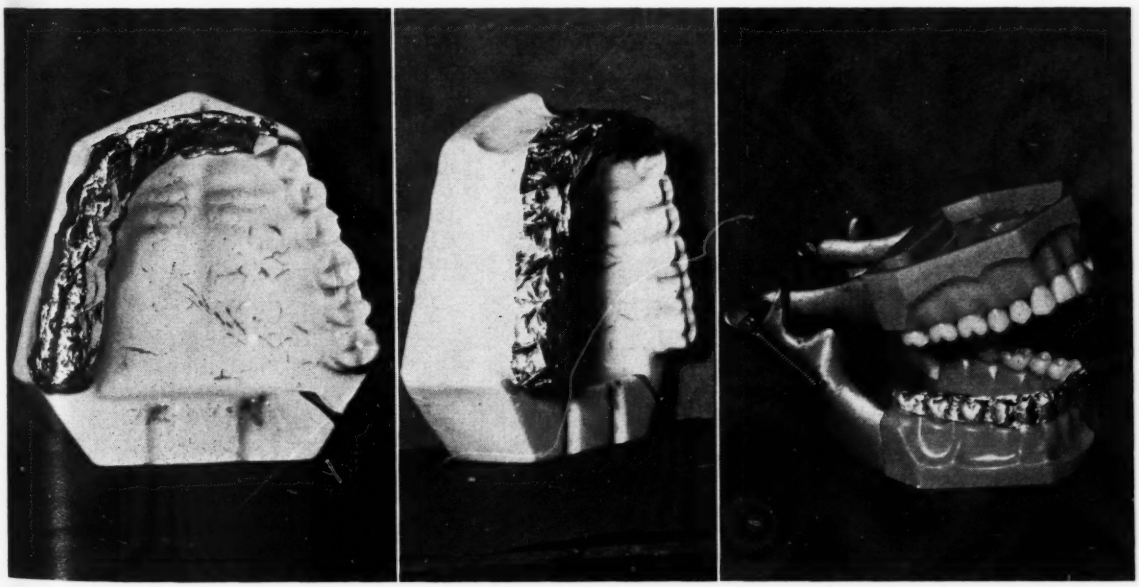
Reaction Hastened — In general a chemical reaction's speed doubles for each 10-degree rise in temperature, hence the reaction is speeded up enormously by boiling.

Theoretic Discussion of Proposed Technique

The electromotive series of the metals is nothing more than a finite index of the ability of metals to go into solution (dissolve) compared to hydrogen. Since they gain electrons when they do so, if two dissimiliar metals are placed in the same acid solution, since they gain electrons in different amounts, if a wire is connected from one plate to the other, electricity will flow because of difference of potential. Electricity is merely the flow of electrons.

Battery Short Circuited — In this case a battery is designed to use the calcium (metal) in the enamel as one plate and another metal (tin foil) as the other and the fluoride as the battery solution. The battery is short circuited by forming and touching the tin foil to the outside of the tooth surface.

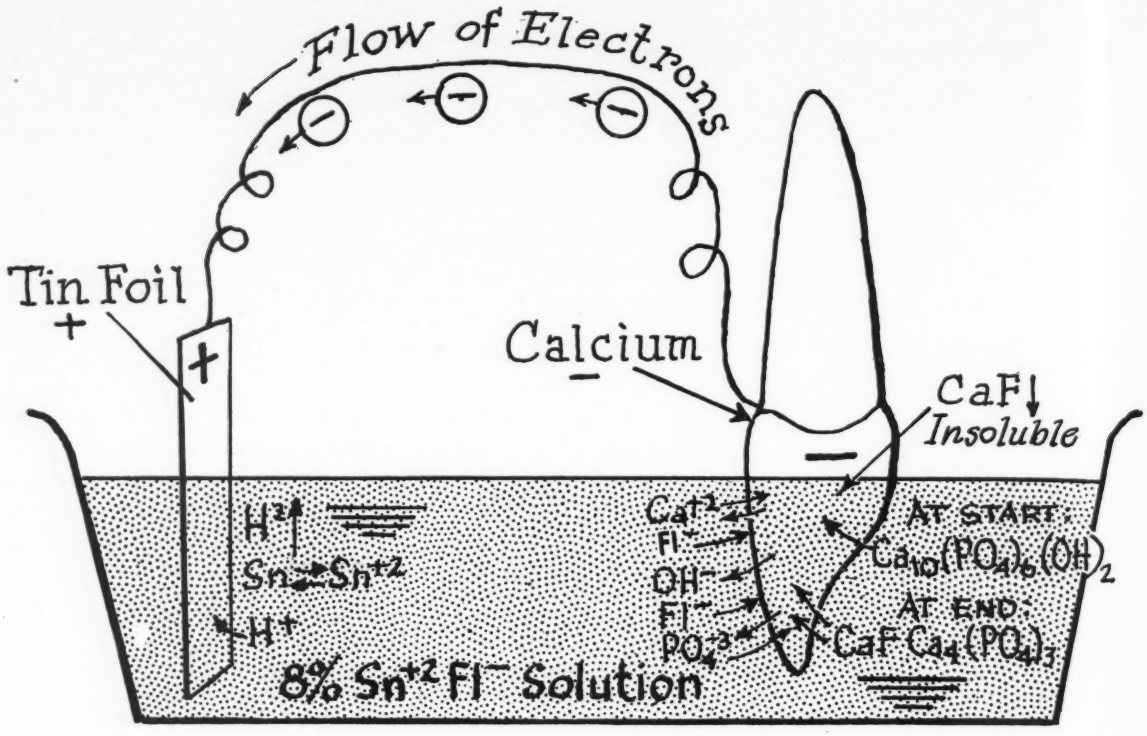
Internal Reactions Reverse of External Reactions — It is believed that the reason that this phenomenon has not been investigated previously is due to the fact that the internal reactions



3 (left).
Large model of upper mouth showing how foil is adapted to exposed tooth surfaces. The foil may be heated before using for this purpose in the same water bath.

4 (center).
Another view of large model showing adaptation of foil around teeth to form a fluoride battery.

5 (right).
Another picture of a model showing adaptation of the foil around lower teeth of one quadrant.



6.
Schematic drawing showing reactions in electric cell constructed between enamel of tooth and metal plate and electrolyte of stannous fluoride.

of a battery are just the *reverse* of the external reactions. In this case the calcium negative plate short circuited to the foil is losing electrons and tending to become more positive causing more calcium to dissolve. If the same thing were done with an outside source of direct current such as a battery, calcium would be made the positive pole.

Dental Battery Short Circuited—Because the calcium in the tooth enamel is higher on the electromotive series, it is more readily dissolvable in acids than almost any other metal and because of this fact, it leaves the tooth enamel more negatively charged with respect to any other metal lower on the electromotive series. If the dental battery is short circuited, however, by touching the metal and enamel together, the previous equilibrium is altered and the calcium of the enamel loses electrons to the metal because it is more negative. Therefore more of the calcium goes into solution. The fluoride is attracted to the calcium where it combines with calcium to form insoluble CaF Ca_4 (PO_4) apatite on the enamel. This is precisely what is intended by any topical fluoride treatment.

Steps in Procedure

1. Warm the fluoride solution to 130 degrees. This can be done by constructing a test tube holder from a broom clip. Some stiff brass wire is soldered to the posterior to hold it vertical in a compound heater.

2. The compound heater is filled with water, the thermostat set to 130 degrees, the freshly prepared fluoride solution is placed in the test tube and inserted into the broom clip test tube holder.

3. As explained previously, chemical reactions double in speed for every 10-degree rise in temperature. Since a rise of 30 degrees over mouth temperatures is being created theoretically the speed of the topical fluoride reaction is increased six times or: 1/6 x 4 minutes, or 40 seconds, which should equal 4 minutes in reaction time at 98.6 degrees. However, there is some cooling of the fluoride when applied to the tooth so the application time is reduced from 4 minutes to 2 minutes, a saving of half the time usually required.

4. After the fluoride is applied, the tin foil is adapted to the quadrant and held in place for the remainder of two minutes. It is also suggested that the patient's mouth can then be rinsed thus eliminating the long period in which an unpleasant taste is experienced. Essentially the technique described here is simple and no complicated equipment is required.

16½ *West Main*

The EDITOR'S *Page*

ANY METHOD that will increase the effectiveness in the detection of unsuspected cancer of the mouth is a procedure that should be more widely applied in dental diagnosis. There are approximately 20,000 cases of oral cancer a year in the United States of which about 2,200 are treated in VA hospitals. In the VA Cooperative Study on Oral Exfoliative Cytology the application of this technique indicated that more than 10 per cent of the oral cancers discovered were not suspected at the time of physical examination.[1]

Exfoliative cytology is the method of cell analysis developed by Papanicolaou. Smears made from the uterine cervix have a high index of reliability in detecting aberrant or disorganized cells that are exfoliated from tissue in the precancerous stage. The lives of many women have been saved by using this simple test for cancer in situ. The same principle of cytologic analysis has been applied in studying smears from oral lesions under the VA Cooperative program.

In the first year of the Veterans Administration study 841 smears from oral lesions were examined. There were 147 cases of cancer discovered. Every area of chronic inflammation, hyperkeratosis, granulation tissue, ulceration in the mouth should be studied by the cytologic method.

The application of oral exfoliative cytology in dental practice was described by one of the participants in the VA conference (Robert E. Crowley, D.D.S., VAH, Montrose, New York):

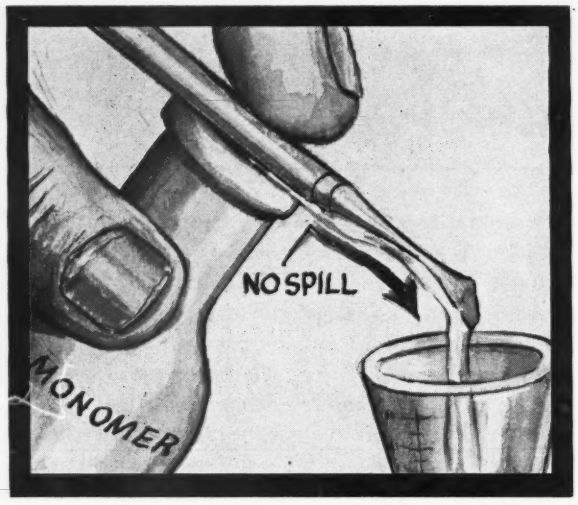
". . . imagine a dentist examining a mouth and finding a small innocuous lesion essentially asymptomatic. The question passes through his mind as to whether he should take a biopsy. But he probably dismisses this since such a procedure involves discomfort or pain to the patient, may even arouse a cancer phobia in the patient and he feels that in view of the insignificance of the lesion it is disproportionate to take a biopsy. His orientation is highly negative and he tends not to study or to be interested in the lesion. Furthermore, he is conditioned by this outlook not to search for such lesions because he is not really going to do anything about them. But with the introduction of the exfoliative cytology procedure he has a method that is extremely simple to use, does not require special skills and training, is painless and readily acceptable by the patient. Therefore, his orientation toward the significant lesion is no longer negative. He has a technique that is proportionate to the innocuous small lesion and avoids the drawbacks of the biopsy.

"When he encounters such a condition he will study it closely and evaluate it carefully before he takes a smear because in a sense he is matching his diagnostic skill and judgment against the cytology report. If the report differs from his diagnosis it will stimulate him to restudy the lesion to see if there was some clinical clue that he had overlooked. Furthermore, if the cytology indicates that a biopsy is needed, he feels on firmer ground in bringing this to the patient's attention and making the biopsy. As he continues to use the technique he is stimulated to become interested in the cytology and from that to the histopathology of the biopsy material. He finds now that his diagnostic acumen has sharpened. He sees refinement of texture and color, variations that he formerly did not notice and he begins to integrate the individual observations into a meaningful pattern that identifies disease. From this it can be seen that the technique becomes a valuable teaching mode. The technique motivates him toward learning. . . . No field will be long held unless the profession cultivates it. We must prove our right to the area and a major part of that proof lies in the contributions a profession makes to the body of diagnostic and treatment procedures employed in that area. In this respect the importance of the adaptation of exfoliative cytology technique to the oral region is obvious."

It would be difficult to make a clearer statement on professional goals and ideals than is included in this quotation.

The technique of taking a smear from oral lesions for exfoliative cytology study is simpler than most procedures in dental practice. The surface of the lesions is cleaned with a normal salt solution. The surface is not dried. The entire surface is scraped several times with the edge of a wooden tongue depressor. The scrapings are spread evenly on a glass slide. The slide is plunged immediately into a fixative of 95 per cent ethyl alcohol. The smear is then ready for staining and study by a pathologist.

[1]Interim Report of Veterans Administration, Cooperative Study of Oral Exfoliative Cytology, U. S. Government Printing Office, Washington 25, D.C., 1961.



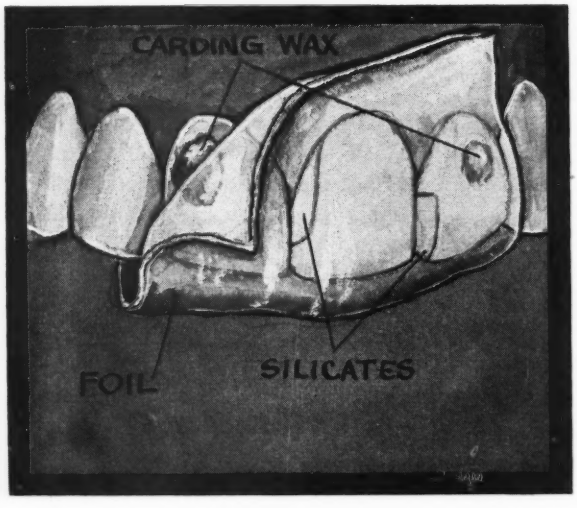
1

Clinical and Laborato

Pouring Acrylic Monomer

Lawrence Wiland, D.D.S., Flushing, New York

1. Place an instrument across the lip of the bottle to act as a column along which the monomer will flow. This will prevent spilling of the fluid.

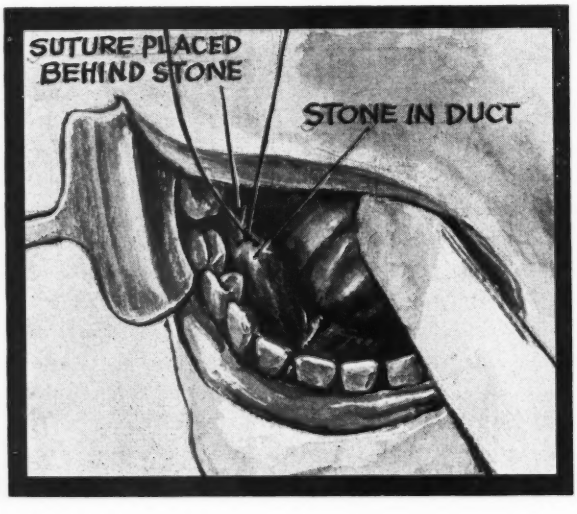


2

Technique for Moisture Control

Ollie J. Weigel, D.D.S., Ankeny, Iowa

2. After the silicate is placed press carding wax on the teeth lateral to the restoration and fold foil over the labial and lingual surfaces. This shield will protect the restoration from moisture.



3

Removal of a Salivary Stone

Charles M. Hyder, D.D.S., Knoxville, Tennessee

3. Place a suture through the floor of the mouth and around the duct of the gland posterior to the position of the stone When the suture is tied it will prevent the stone from slipping backward in the duct. The suture also allows the tissues in the floor of the mouth to be raised during surgery.

READERS *are Urged to Collect $10.00*

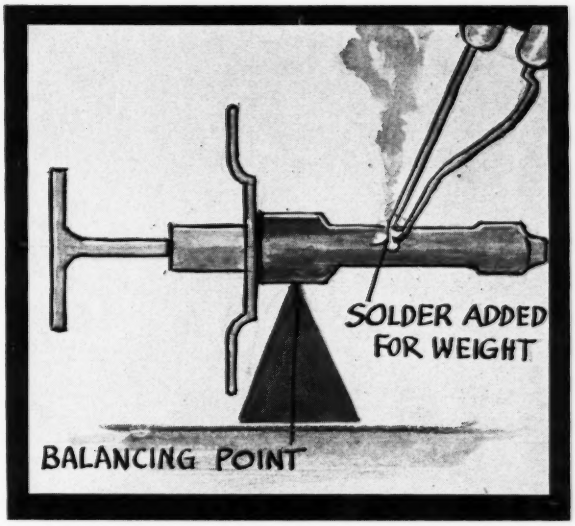
For every practical clinical or laboratory suggestion that is usable, DENTAL DIGEST will pay $10 on publication. You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make suitable illustrations; write a brief description of the technique in-

SUGGESTIONS . . .

Balancing a Dental Syringe

Henry Heimansohn, D.D.S., Danville, Indiana

4. A metal syringe should be properly balanced to assure adept use. Place the syringe on a straight edge fulcrum and add solder to establish absolute balance.

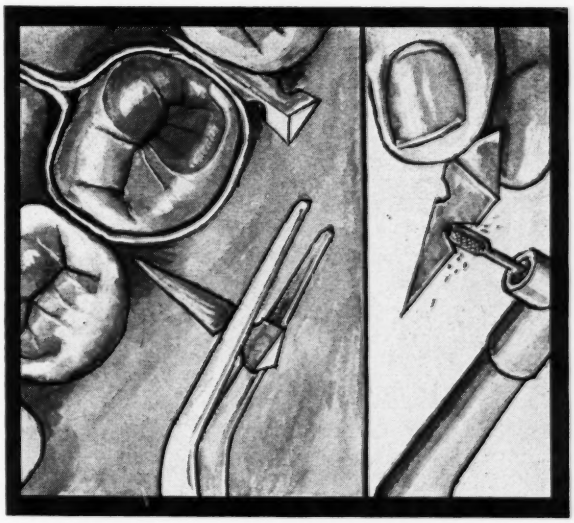


4

Safer Wedge Insertion

Edward C. Reeder, D.M.D., Montgomery, Alabama

5. To lessen the danger of the patient aspirating a matrix band edge, notch the edge with a No. 557 bur so the wedge can be grasped more securely with cotton pliers.

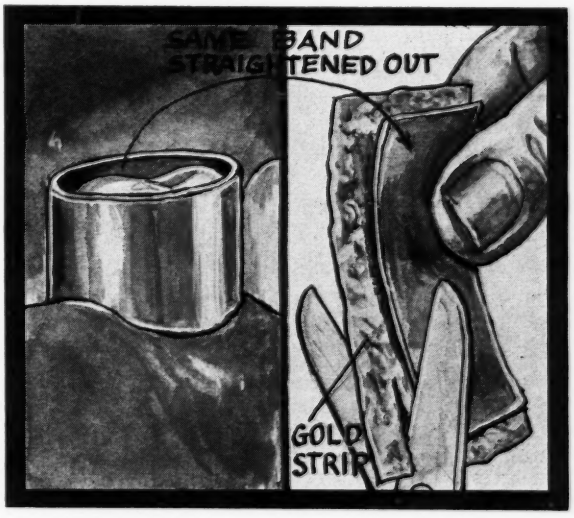


5

Band Measurement for Soldered Crown

William R. Eberle, D.D.S., Chicago

6. Fit a copper band tightly around the preparation. Remove the band, cut, and use as a pattern when cutting the gold.



6

volved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time. Turn to page 544 for a convenient form to use.

Send your ideas to Clinical and Laboratory Suggestions Editor, DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

MEDICINE and the Biologic Sciences

Blood Transfusions—Medicolegal Aspects

The number of damage suits brought against blood banks because of alleged transfusion hepatitis seems to be increasing. The situation is particularly difficult because no screening test is specific for the virus of hepatitis, including (1) thymol turbidity, (2) virus agglutination, (3) serum bilirubin, (4) alkaline phosphatase, (5) cephalin-cholesterol flocculation, (6) bromsulphalein retention, and (7) zinc turbidity.

Each bottle of whole blood should be labeled with the warning that, despite careful donor selection, whole blood may contain the virus of serum hepatitis, which cannot be detected by laboratory tests.

The donor-screening procedures of the National Institute of Health should be observed explicitly to exclude donors with possible previous hepatitis and those who, during the previous six months, have been in close contact with anyone known to have had a transfusion or injection of blood, plasma, or serum.

All donors who have contributed blood to persons with verified serum jaundice should be interviewed concerning their previously negative findings of hepatitis and past blood bank records. If possible, donations within the previous eighteen months are traced back to the recipients' physicians to determine if any developed hepatitis.

A special effort should be made to obtain adequate hospital reporting of transfused patients with hepatitis. A written diagnostic summary should be requested from the patient's physician to verify that the transfusion caused hepatitis.

Donors are permanently rejected who do not meet the following criteria: (1) a negative history of hepatitis reaffirmed by interview, (2) hepatitis did not occur after transfusion of a single unit of blood, which is seldom justified medically; (3) affirmation that donor has not associated with a person known to have hepatitis. In addition, a donor under suspicion must have a record of at least two previous blood donations within a six to eighteen-month period to a patient or patients not developing serum hepatitis.

Most lawsuits have been brought on three grounds, negligence, implied warranty, and violation of purity standards and statutes.

Alsever, John B.: The Blood Bank and Homologous Serum Jaundice, New England J. Med. **261**:383-386 (March) 1959.

Foreign Bodies in Ears and Noses of Children

Anything small enough to pass into the nostril or external ear openings may be found lodged in a child's nose or ear. These objects are often pushed farther back by unskillful attempts at removal.

A foreign object in the nose is often detected by the immediate symptoms of pain, sneezing, or unilateral obstruction. Symptoms, however, may not appear early and weeks or months may pass before infection causes pain. Late symptoms include bleeding from the nose and one-sided nasal blockage accompanied by foul discharge, breath odor, or both.

Several methods of removal are used. A cooperative child may be told to hold the unobstructed nostril and blow forcibly out of the affected nostril. If instruments are used, the object is best removed by use of a curved probe, which is placed behind and usually over the top of the foreign body and pulled forward. Use of a shrinking agent and Pontocaine or cocaine applied locally opens the nasal air space and lessens pain. An uncooperative child should be held as still as possible during this procedure. Grasping forceps can be used if the object is not large or is not of extremely soft material. Forceps may push the object farther back in the nose if the child is especially uncooperative. The nose may be irrigated with normal saline administered through the unaffected nostril. Care must be taken not to push the object into the nasopharynx. Some uncooperative children with large impacted foreign bodies require general anesthesia.

A foreign body may be in the ear for a long time without causing symptoms, depending on the object's size, character, and site in the canal. Symptoms includ deafness, a sense of fullness, itching, and tinnitus. Pain and discomfort occur when the object is deeply lodged or pointed.

The types of bodies that may lodge in the ear include animate, inanimate, and hygroscopic objects and cerumen.

Animate objects can be killed by instilling alcohol in the ear. The object can then be irrigated from the ear with warm water or saline and a metal syringe. Pointing the tip of the syringe at the posterior canal wall washes out the foreign body more easily and lessens the danger of injury to the tympanic membrane and middle ear. Water at 105° Fahrenheit is best.

Inanimate objects lodged super-

(*Continued on page* 544)

dental infections respond to V-CILLIN K®

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ficially in the canal are removed with a ring curet if not wedged too tightly and the child is quiet. If the object is deep in the canal or if the child is restless, irrigation with a metal syringe is best.

Repeated attempts to remove an object can traumatize the ear. The procedure is facilitated by general anesthesia. Since hygroscopic foreign bodies, such as beans, absorb water and swell, irrigation is best done with alcohol and oily solutions.

Cerumen is soft and oily or hard and dry. The soft oily type comes out readily with a metal syringe. Cerumenex® successfully dissolves and liquefies hard cerumen. The product can be used in either of two ways: (1) The ear canal is filled with Cerumenex for fifteen to twenty minutes and then irrigated, or (2) three drops of Cerumenex are placed in the ear three times a day and, after three days, the ear is irrigated.

Sperring, Thomas A.: Foreign Bodies in the Nose and Ears of Children, Proc. Child. Hosp. **15**:249-252 *(August) 1959.*

CLINICAL AND LABORATORY SUGGESTIONS

(*See pages* 540 *and* 541)

Forms to be Used by Contributors

To: Clinical and Laboratory Suggestions Editor

DENTAL DIGEST
708 Church Street
Evanston, Illinois

Explanation of Procedure:

Sketch:

From:_____

_____

Subject_____

Suggestions submitted cannot be acknowledged or returned.

$10 will be paid on publication for each suggestion that is used.

Contra-Angles

The Tight Billionaire

A TEXAS billionaire, reputedly one of the wealthiest men in the world, is reported to be a close one with the dollar. He drives an Oldsmobile, parks his car and walks several blocks to avoid a parking fee, carries his lunch in a brown paper bag, trims his own hair. He is so rich that he can afford to be thought tight. The really poor man cannot afford the luxury of being considered a tightwad.

Perhaps the billionaire is carrying things too far with his program of personal austerity, but many of us might be better off if we never made an effort under any circumstance to impress the world with any sign of affluence.

I have observed dentists at meetings who lived in splendor and out of proportion to their real wealth. The meals carried to the suites (not rooms), the $12 for a $5 bottle of whisky delivered by "room service," the lavish hand with the tips — dentists like to show off in this fashion. I have seen some of them in their home town surroundings and they were rather tight-fisted fellows.

We have all learned with some chagrin that the Big Spender who appears in our offices and wants "nothing but the best" may not be the most favorable prospect as a paying patient. Over the years I have known a few of these Cadillac-diamond-mink patients who required a bit of nudging before they paid their accounts for professional services rendered.

The external appearance may be deceiving—both ways.

Psychiatry in American Life

No series of quotations or comments could measure the value of the contribution made by the *Atlantic Monthly* in the special supplement PSYCHIATRY IN AMERICAN LIFE that appeared in the July 1961 issue. If you are not a subscriber to the *Atlantic* you may be able to buy the special supplement by writing to 8 Arlington Street, Boston 16, Massachusetts. If these reprints are not available hasten to the nearest library to read this supplement.

Someone will raise the objection that dentists are not psychiatrists. That is true. Neither are the readers of the *Atlantic*. Anyone who professes the minimum of culture should be familiar with present day attitudes toward mental health. Dentists are in daily touch with people who are covered with dread, torn by tensions, and steeped in anxieties. If we have the professional approach to dental practice we should try to understand these emotional states.

The more we understand the structure and the function of the nervous system, its responses, its shadings and reactions during different conditions the more effectively we will function.

(*Continued on page* 548)

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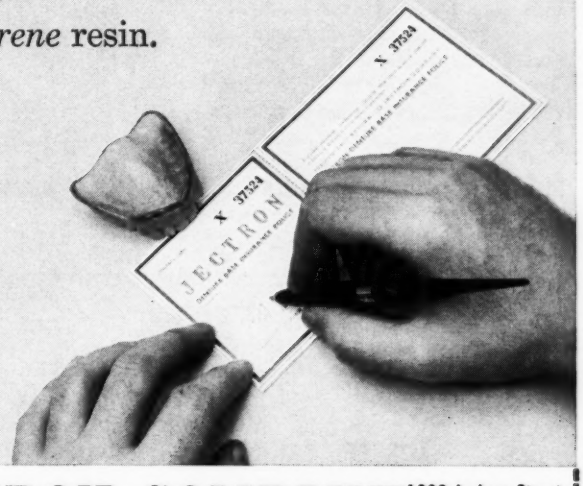

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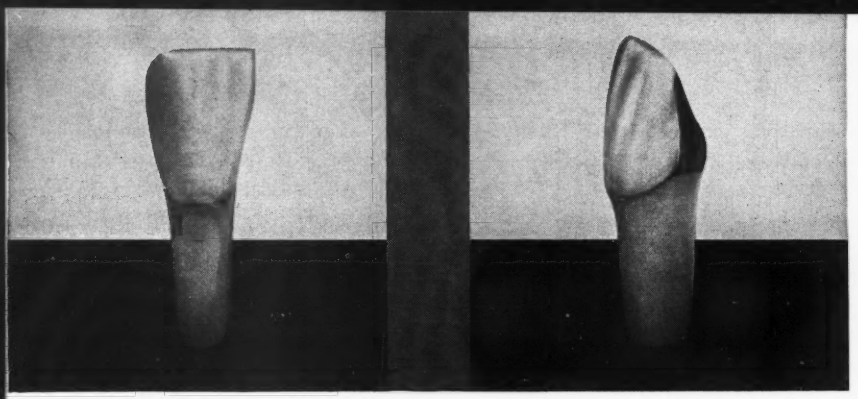

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NEY-ORO P-16 is a hard, gold color crown and bridge alloy designed especially for use in porcelain fused to gold technics. The porcelain employed in combination with it should mature at a temperature of about 1800°F and should also be one especially formulated for gold-porcelain restorations.

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For those interested in the increasingly popular porcelain fused to gold type of bridge, Ney offers this thoroughly researched, thoroughly tested dependable team of NEY-ORO P-16 Casting Gold and its companion solder. *The J. M. Ney Company, Hartford 1, Conn.*

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS, OF AUGUST 24, 1912.

Of Dental Digest, published monthly at Pittsburgh, Pa. for October 1, 1961.
State of Pennsylvania,
County of Allegheny,
ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared R. C. Ketterer, who, having been duly sworn according to law, deposes and says that he is the Vice President of the Dental Digest, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 411, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the name and addresses of the publisher and editor, are: Editor, E. J. Ryan, B.S., D.D.S., 708 Church Street, Evanston, Ill.; Publisher, R. C. Ketterer, 1005 Liberty Ave., Pittsburgh, Pa.; Managing Editor: None; Business Manager, R. C. Ketterer, 1005 Liberty Ave., Pittsburgh, Pa.

2. That the owners are: Dental Digest, Inc., 1005 Liberty Ave., Pittsburgh, Pa.; Oral Hygiene, Inc., 1005 Liberty Ave., Pittsburgh, Pa.; M. B. Massol, 1005 Liberty Ave., Pittsburgh, Pa.; R. C. Ketterer, 1005 Liberty Ave., Pittsburgh, Pa.; John J. Downes, 224 South Michigan Ave., Chicago 4, Ill.; Dr. E. J. Ryan, 708 Church St., Evanston, Ill.; Dorothy S. Sterling, 1005 Liberty Ave., Pittsburgh 22, Pa.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs above giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no record to believe that any other person, association, or corporation has any interest direct or indirect in the said stocks, bonds or other securities than as so stated by him.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was 19,500.

(Signed) R. C. KETTERER,
Vice President

Sworn to and subscribed before me this 1st day of October, 1961.

(Seal) N. M. Gaertner, Notary Public.

Our job is to relieve fear and anxiety as well as perform surgical and restorative procedures. In fact, if we cannot control apprehension we may not have the chance to perform our operations at all; people will avoid us. Fear keeps people from the dental office; pain drives them there. If we can lessen the fear and dread of dental treatment we can prevent the pain from dental disease.

There has been considerable literature in recent years on psychosomatic medicine; some has appeared in DENTAL DIGEST. The subject is still vague to many dentists and physicians. Some, in their ignorance, are openly hostile to the implications. In the *Atlantic* symposium the distinguished Stanley Cobb, M.D. defines the issue clearly:

"If we, as practicing physicians, do not really believe in the unity of mind and body, we either think, 'There's nothing wrong with this patient; it's only nerves,' or we ride the other hobby and in our enthusiasm for psychotherapy overlook symptoms that could be relieved medically. It is a common situation to find a patient incapacitated because a small pain he could well live with—if given understanding support—has been built up into much suffering. I never saw a patient with purely imaginary pain..

"In many medical communities, young physicians are taught to spend more time collecting data from the laboratory than quietly listening to the patient tell his story in his own words. There has been a tendency to leave this to the psychiatrist. This is an unfortunate result of specialization, because many patients who seem to have straightforward medical or surgical problems are not given a chance to talk. Psychiatrists have learned to listen."

Another contributor to the *Atlantic* symposium (Greer Williams) has drawn a picture that fits many clinicians as we approach a person with an emotional disturbance:

"The medical profession is as remiss as the public itself in grappling with the mental illness problem. It is

(*Continued on page* 552)

MAKES IT EASIER FOR YOUR PATIENTS TO PRACTICE WHAT YOU PREACH— AUTOMATICALLY

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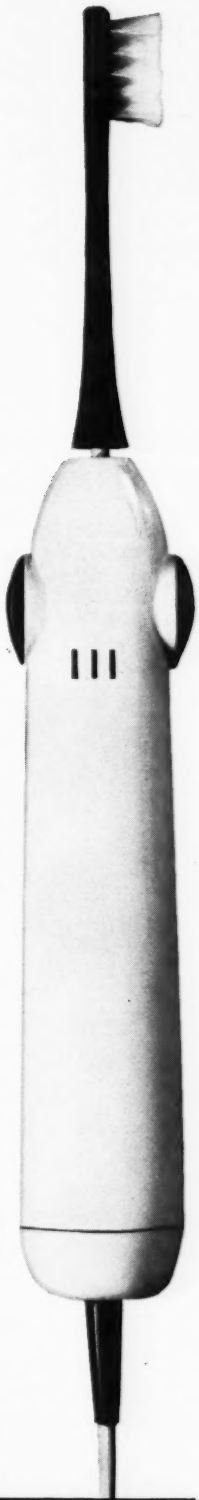

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The patient merely attaches his personal brush unit and guides the instrument across buccal and lingual tooth and gum surfaces. BROXODENT automatically brushes in the recommended vertical brush motion—rapidly and efficiently cleaning every tooth surface, gently stimulating and massaging all supporting tissue structure.

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1. Recent tests demonstrate that the Dura-Blend shade guide matches natural teeth three times as often as the nearest competitive shade guide.
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3. Shades are consistent from batch to batch. No matter when Dura-Blend teeth were made, they will match your Dura-Blend shade guide.
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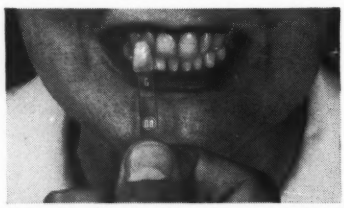

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Dura-Blend teeth provide the greatest consistency to their own shade guide.

5. Dura-Blend shade guides are consistent with each other. Your shade guide will match your laboratory's shade guide.
6. Dura-Blend resin teeth match Myerson's porcelain teeth so well that you can use any desired combination.

The translucency and surface lustre of natural teeth are duplicated in Dura-Blend resin teeth. They harmonize so well with adjacent natural teeth that they proved 89% undetectable by dentists in tests conducted at state dental meetings.

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common knowledge, confirmed by surveys, that the average physician, as well as the average layman, has unfavorable, sometimes openly antagonistic attitudes toward persons with psychological disturbances and toward psychologists themselves. The ordinary doctor's training and experience is not slanted toward an appreciation of emotions and their implications, and many doctors have only one approach to mental illness: they try to get the patients out of their offices as quickly as possible."

The story of the struggle by Tolstoy who refused to *look down* but insisted that he *look up* is an inspiration to all of us who have moments of discouragement and despair. The incident is told by Ira Progroff.

The *Atlantic* symposium ends on a note of humanism written by Robert Coles, M.D.:

"When the heart dies, we slip into wordy and doctrinaire caricatures of life. Our journals, our habits of talk become cluttered with jargon or the trivial. There are negative cathects, libido-quanta, 'pre-symbiotic, normal-autistic phases of mother-infant unity,' and 'a hierarchically stratified, firmly cathected organization of self-representations.' Such dross is excused as a short cut to understanding a complicated message by those versed in the trade; its practitioners call on the authority of symbolic communication in the sciences. But the real test is whether we best understand by this strange proliferation of language the worries, fears, or loves in individual people. As the words grow longer and the concepts more intricate and tedious, human sorrows and temptations disappear, loves move away, envies and jealousies, revenge and terror dissolve. Gone are the strong, sensible words with good meaning and the flavor of the real."

There are 50 pages of wisdom recorded by 14 authors in the *Atlantic* supplement PSYCHIATRY IN AMERICAN LIFE. Any dentist who wants to understand his patients should read these contributions. As a by-product he will gain insight that will help him in *all* interpersonal relations. He may even understand himself better — a profound accomplishment.

Consultation in the Hallway

The other day an old gentleman was having some trouble reading the names on the office directory in our building. When I came along he asked if I would help him. He was looking for somebody whom he had once consulted to ask him again about his prostate that had been giving trouble for the past 30 years. He couldn't remember the name of the physician. I read off the list of names but none sounded familiar.

When the old man asked if I was a tenant in the building I admitted the fact. He considered that I might be the long lost consultant. I told him that his problem was out of my professional field, but I understood something of his plight from personal bouts of nocturnal frequency. This personal aside did not impress the old gentleman. He proceeded with a full review of his symptoms — in a loud voice that deaf old men of 85 often raise.

(*Continued on page* 555)

This incident has no startling significance except to strengthen some and refute other prevailing theories on geriatrics. The old man was confused with the kind of confusion that often overtakes people who have arteriosclerotic changes in the brain. This is a fate that overtakes many people who have lived 85 years. He did not, however, show any of the external stigmata of a person who had suffered a "little stroke" that my friend Walter Alvarez has described so dramatically: No gravy on the tie, no whiskers missed while shaving, no fetor of incontinence. The old man wore a suit that fit him well; he had not lost weight. His shirt was crisp white; his tie spotless. He was quite dapper and had not lost the spring in his step. His dentures were not loose!

I am taking a roundabout way to present a case history. This style would not impress any of the professors in the clinical sciences who are so hard-nosed about such things. The fact that the old man described his 30-year complaint of prostatic distress does not mean this time span is accurate. He may or may not have had a benign enlargement of the prostate of this duration. The arteriosclerotic brain is not the most faithful time machine.

As a dentist I was impressed with his old dentures that had not loosened. The denture base and the denture teeth were stained. The moulds were not of new design; the porcelain was too opaque for modern denture teeth. If old dentures have not loosened it is *a* sign that the tongue and facial muscles were not involved in a cerebral accident.

When people who have worn dentures successfully for years and *suddenly* complain that they are loose (without soreness) it is *a* sign that something has happened inside the brain rather than inside the mouth. So far as I know this diagnostic fact has never been made known generally to dentists—or to physicians. Sudden looseness of the dentures plus soreness *may* be a sign of primary or metastatic cancer of the jaw.

Walter Alvarez and all other astute clinicians have stressed the importance of *looking at and talking with the patient*. The machines, the laboratory procedures, the "tests" have some validity if the interpretation is matched with wisdom. We can, however, carry science so far that we forget the *person* who has the disease or disability.

—E.J.R.

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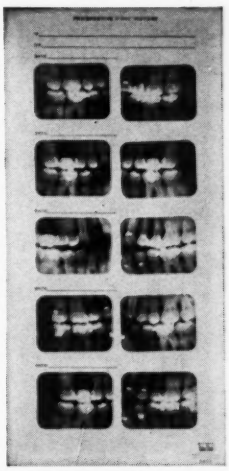

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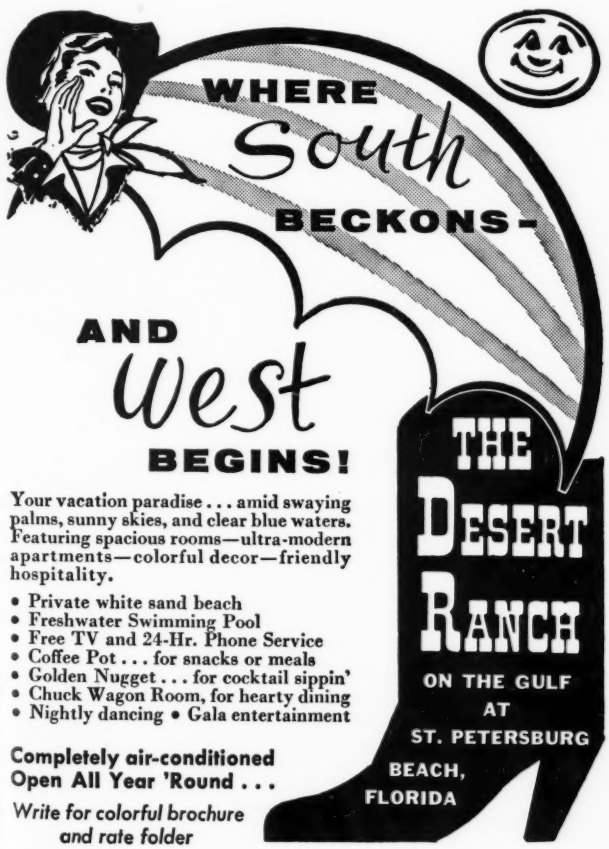
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